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A Comparison of Soviet and US Defense Activities, 1970-79

An Intelligence Assessment

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SR 80-10133
October 1980

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An Intelligence Assessment

Information available as of 31 May 1980 was used in the preparation of this report.

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This assessment was prepared by the Military-Economic Analysis Center, Office of Strategic Research, and coordinated with the National Intelligence Officers for Strategic Programs, General Purpose Forces, and USSR/Eastern Europe and the NIO at Large. Comments and queries are welcome and may be directed to the Chief, Military-Economic Analysis Center,

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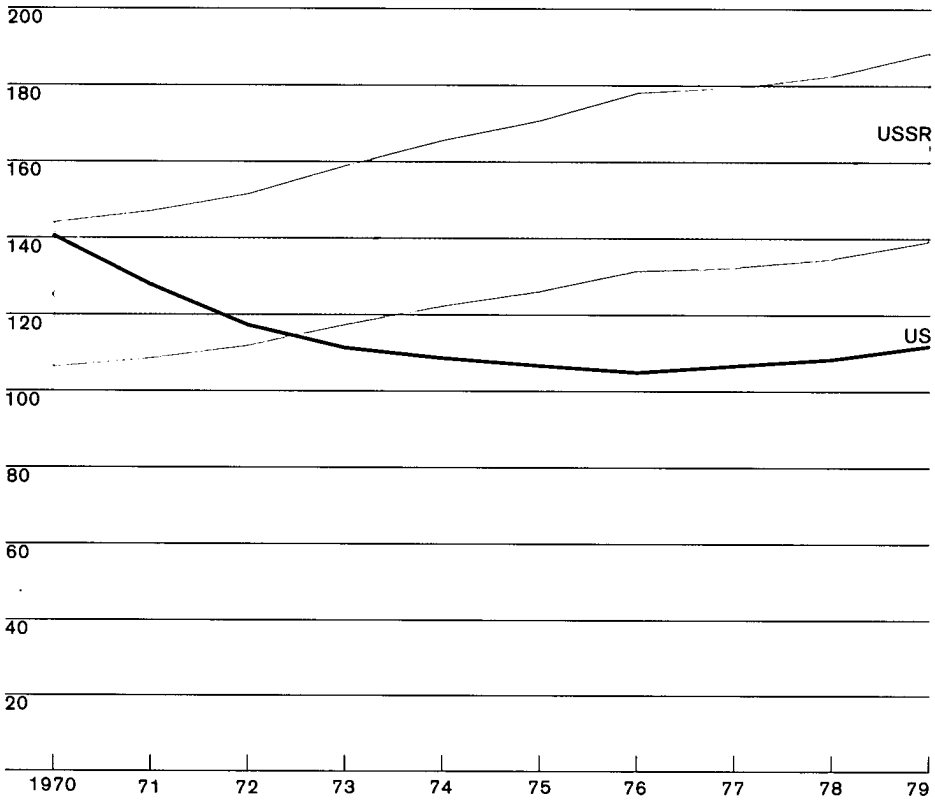
SR 80-10133
October 1980

US and Soviet Defense Activities

A comparison of US outlays with estimated dollar costs of Soviet activities



Note: The color band in the chart is calculated as ± 15 percent of our estimate for each year. We believe it is unlikely that the actual value is outside that range.

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A Comparison of Soviet and US Defense Activities, 1970-79

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Note: This publication is a classified supplement to an unclassified paper titled Soviet and US Defense Activities, 1970-79: A Dollar Cost Comparison, *issued in January 1980. The key judgments are essentially the same as those in the earlier paper.*

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The reader is cautioned that the dollar cost estimates used in this comparison of Soviet and US defense activities must be viewed in terms of the limitations and the conceptual framework explained in the Introduction, pages 1-7.

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Overview

Total Defense Program

For the 1970-79 decade, the estimated cumulative dollar cost of Soviet defense activities (excluding pensions)—that is, the cost of reproducing them in the United States—exceeded cumulative US defense outlays by approximately 25 percent. The trends in defense activities of the two countries were dissimilar for the first two-thirds of the decade, but they have been more comparable since then.

- When expressed in constant 1979 US prices, the trend of the annual dollar costs of these Soviet activities was one of continuous growth throughout the period, averaging 3 percent per year. Growth was evident in nearly all the major elements of the Soviet defense establishment.

- In contrast, US outlays in constant dollars declined continuously from 1970 until 1976, at an average rate of almost 5 percent per year. Since then, however, most elements of the US defense establishment have grown. The average growth rate of total outlays since 1976 has been 2 percent per year.

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As a result of these trends, the estimated annual dollar costs of Soviet defense activities exceeded comparable US outlays by a widening margin in every year from 1971 to 1976. For the rest of the decade the absolute difference stayed relatively constant. For 1979 the estimated Soviet dollar costs were $165 billion—50 percent higher than total US outlays.

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In sum, the USSR has committed substantially more resources (measured in terms of the common denominator of dollars) over the decade than has the United States. This is true for total defense activities and for almost every subcomponent of that total as well. Further, the growth rates of these Soviet

activities from 1970 to 1979 have generally exceeded the corresponding rates for similar US defense activities. The trends and levels in the estimates of selected individual weapon systems production and manpower, both of which are included in the paper, confirm this view. 25X1

Resource Category Comparisons

Examining the estimated dollar costs of the resource categories—investment, operating, and research, development, testing, and evaluation—yields the same conclusions as examining the estimated total costs. The estimated Soviet dollar costs for each of these categories exceed their US counterparts both for the decade and in 1979. For investment and RDT&E, they were 50 and 45 percent higher, respectively, than corresponding US outlays for the decade. Estimated Soviet dollar operating costs, however, were only slightly more than corresponding US outlays for the 1970s. The Soviet pattern for each resource category is one of continuous growth; the US pattern is one of decline until the middle 1970s and slow growth since then. 25X1

Military Mission Comparisons

The estimated dollar costs of Soviet and US defense activities can also be compared in terms of missions—strategic, general purpose, and support. The estimated dollar costs of Soviet strategic forces were three times corresponding US outlays over the decade; the estimated costs of Soviet general purpose forces were 50 percent larger. Only for support forces did US outlays exceed estimated Soviet dollar costs over the decade. 25X1

Each Soviet major mission grew throughout the decade. US outlays for each of the three major missions fell until the middle 1970s, but they have grown slowly since then. 25X1

Contents

A Comparison of Soviet and US Defense Activities, 1970-79

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Introduction

Purpose

US policymakers often require comparisons between US and Soviet defense activities. Although such comparisons sometimes include measures of military effectiveness, they frequently entail no more than a simple summing of the forces belonging to each side. The latter comparisons are usually made in terms of physical units. Unfortunately, comparisons of physical units are complicated by differences in the design and performance of different types of equipment. Comparing the order of battle of the Soviet tactical air forces with that of the US tactical air forces, for example, has only limited meaning.

25X1

One way to summarize such diverse activities is to assign to each activity some suitable value that captures its relative worth and then calculate the weighted sum of all activities. For defense activities, a weighted value in common use is the cost of resources devoted to each activity. These costs can be calculated in any currency. Given the two countries involved in this comparison, dollars seem the most logical choice.[1] US defense planning is done in dollars, and US program tradeoffs are strongly influenced by dollar costs.

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Therefore, in this paper we measure the annual flow of resources devoted to defense in terms of dollars. Specifically, this paper presents estimates of what it would cost, using US prices and wages, to produce and man a military force of the same size and with the same weapons inventory as that of the USSR and to operate that force as the Soviets do. The principal effects of inflation have been removed from all costs and outlays by displaying the defense activities of each country in constant dollar terms.

25X1

[1] In addition to our dollar estimates, we make aggregate comparisons based on rubles. The procedure requires putting ruble prices on all US defense activities. We obviously cannot do this directly, but we do have a very detailed substitute methodology. Our general procedure is as follows: Pay and allowances are costed directly by dividing each service into 21 ranks from general to private. The manpower in each rank is multiplied by ruble rates of pay, travel, clothing, and so forth. RDT&E, procurement, construction, and operations and maintenance are calculated using ruble-dollar ratios. The dollar value of each of about 80 separate resource accounts are multiplied by the appropriate ruble-dollar ratio. These ruble-dollar ratios themselves are each value weighted, reflecting the importance of different subcomponents of that particular account. The ratios also take into account those areas where we judge US weapons have a significant technological or quality advantage. The results of these calculations show that aggregate Soviet defense costs exceeded estimated US ruble costs by 30 percent in 1979.

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In addition, this paper provides information on US and Soviet order of battle, production, and manpower to supplement the dollar estimates. This information, the additional detail in the cost estimates, and more recent data distinguish this paper from the unclassified dollar cost comparisons released in January of 1980.[2] 25X1

Definitions

The following US activities and their Soviet counterparts are included in this comparison:

- National security programs funded by the Department of Defense.
- Defense-related nuclear programs funded by the Department of Energy.
- Selective Service activities.
- The defense-related activities of the Coast Guard. 25X1

The following activities are not included:

- Military retirement pay, which reflects the cost of past rather than current military activities.
- Soviet space activities that in the United States would be funded by the National Aeronautics and Space Administration.
- Military assistance (except for the pay and allowances of uniformed personnel) and all foreign military sales and civil defense programs.
- Veterans' programs.
- Soviet Internal Security Troops, who perform police functions, and Soviet railroad and construction troops, who are not directly involved in national security matters. 25X1

The physical quantity data for weapon systems contained in this paper are of two types: delivery data, which refer to the quantities of selected weapon systems produced by the end of the calendar year, and order-of-battle data, which refer to the existing inventory of weapon systems in active units at a given time (the middle of the calendar year for the Soviet Union and the end of the fiscal year for the United States). 25X1

Methodology

With the exception of those for RDT&E, the dollar costs of Soviet defense activities are developed on the basis of a detailed identification and listing of Soviet forces and their support apparatus. Our model contains a description of about 1,100 types of operating units—for example, surface ships, ground force divisions, and air regiments—and our latest estimates of their order of battle, manning, and equipment inventories and the production of new

[2] *Soviet and US Defense Activities, 1970-79: A Dollar Cost Comparison,* SR 80-10005, January 1980. 25X1

equipment and supplies. This data base reflects contributions from analysts throughout the Intelligence Community and is the best source of qualitative and quantitative information available on Soviet military forces. 25X1

To these detailed estimates of physical resources we apply appropriate US prices and wage rates. This procedure is complex, but in general we do the following:

- For procurement, we estimate what it would cost to build the equivalent physical objects in the United States at prevailing dollar prices for materials and labor, using US production technology and practices and assuming the necessary plants and supplies would be available.
- For operations and maintenance, we estimate the dollar prices that the United States would pay for labor, materials, spare parts, overhead, and fuel to operate and maintain equipment the way the Soviets do.
- For military personnel, we first estimate the military rank of the person in the United States who would be used to perform the function of each Soviet military person and then apply the appropriate US pay and allowance rates to that job. 25X1

These results are aggregated by military mission and by resource category. The costs of duplicating the Soviet RDT&E effort in the United States are estimated in the aggregate by converting an estimate of their ruble costs into US dollars. 25X1

US dollar cost data are in terms of outlays derived from the *Five-Year Defense Program (FYDP)* issued by the Department of Defense in January 1980 and the US budget for fiscal year 1981. The US data have been converted from fiscal year to calendar year terms, and defense-related activities of the Department of Energy, the Coast Guard, and the Selective Service have been added to improve comparisons with Soviet programs. The outlays for each year have been converted to their equivalent in 1979 dollars using detailed price indexes for each type of military expenditure. The US figures in this report, therefore, do not match actual budget authorizations or appropriations. US order-of-battle data were derived from the FYDP; US production data were provided directly by the Department of Defense.

25X1

The cost data presented here are expressed in constant dollars so that trends in cost estimates will reflect real changes in military forces and activities and not the effects of inflation. Prices used in this paper represent the purchasing power of the dollar for defense goods and services at midyear 1979. 25X1

Comparisons With Previous Estimates

Estimates of the dollar costs of Soviet defense activities are revised each year to take into account new information and new assessments of the size, composition, and technical characteristics of the Soviet forces and activities as well as improvements in costing methodologies. The US data used for comparative purposes are similarly revised each year to take into account changes in the FYDP and the *Defense Planning and Programing Categories (DPPC)*.[3] Both the Soviet and US price bases are updated annually to reflect the most recent constant price index information available. 25X1

This year's estimate of the dollar cost of Soviet defense activities for 1978 is about 9 percent higher than the estimate for that year published in 1979. Almost all of the 9-percent difference is the result of changing from a 1978 to a 1979 price base. Although several refinements in our assessments of Soviet defense activities have been made since our last classified report, issued in September 1979, these have not affected the total estimated dollar cost in a major way. 25X1

There are some differences between the estimates contained in this paper and those contained in the unclassified dollar cost comparison we released in January 1980. The most significant of these changes are in US outlays. In the January paper we used estimated outlays for fiscal year 1979. Total actual outlays, used in this paper, are over $3 billion more. 25X1

Confidence in the Dollar Estimates

The reliability of the estimates depends on our ability to measure accurately the levels of Soviet defense activities and to apply accurate cost factors to that data base. We believe that the dollar cost estimate for total defense activities is unlikely to be in error by more than 15 percent for each year over the decade.[4] This judgment, although supported by the use of statistical techniques, nonetheless contains a large subjective element. The margin of error can be much wider for some of the individual items and categories. We are more confident in our estimates for the higher levels of aggregation than in those for lower levels. At the lower levels, our confidence varies from category to category. Further, we are generally more confident in data that represent trends rather than absolute levels, especially if only a single year is involved. 25X1

[3] The use of the DPPC document is explained on page 20. 25X1

[4] We are most confident in our estimates for the middle years of the 1970s, because those estimates are based on the most data. Our confidence is somewhat less for the current year and the early 1970s. 25X1

We place our highest confidence in the estimate of personnel costs, which account for about 35 percent of the total estimated dollar cost of Soviet defense activities for the 1970-79 decade. These manpower costs are obtained by applying US factors for pay and allowances to estimates of Soviet military manpower. 25X1

We also have substantial confidence in our estimates of total military procurement, which represents about 25 percent of the estimated total dollar costs. The dollar costs for procurement are based for the most part on detailed estimates of Soviet weapons production and characteristics that can be ascertained with reasonable confidence with intelligence methods. 25X1

Although we are somewhat less confident in our estimates of operation and maintenance (O&M) costs, we nonetheless regard these estimates as areas where we have made substantial improvements in the last few years, particularly for ships and aircraft. O&M costs are about 20 percent of the UNCC 25X1

Our present estimate of Soviet construction costs, about 5 percent of the total, is somewhat uncertain. It is currently being revised, and next year's estimates will be improved. 25X1

The estimated dollar costs for Soviet research, development, testing and evaluation (RDT&E), which are derived in the aggregate using a less certain methodology, should be regarded as significantly less reliable than those for the other categories. The level and trend of these estimates, however, are consistent with the judgment, made with high confidence, that the Soviet military RDT&E effort is large and that the resources devoted to it are growing. RDT&E costs are about 15 percent of the total. 25X1

All the following data, whether displayed in graphics or tables, are presented as point estimates rather than ranges (or bands). While a range would illustrate the level of confidence we have in each individual estimate more clearly, we have learned that our users find the point estimates more helpful. The reader should remember, however, that there is an implicit confidence band around each one of these estimates and that the band is generally wider the greater the level of detail. 25X1

Limitations of Dollar Cost Estimates

As we have noted, dollars can be used to compare the overall magnitudes and trends of the defense activities of the two countries in terms of resource inputs. They have an important advantage over many other input measures—such as the numbers and types of weapons—in that they permit aggregative comparisons. Dollar cost valuations, for example, take into account differences in the technical characteristics of military hardware, the number and mix of weapons procured, manpower strengths, and the operating and training levels of the forces. 25X1

But dollar valuations still measure input rather than output and should not be used as a measure of the relative effectiveness of US and Soviet forces. Assessments of capability must take into account strategic doctrine and battle scenarios; the tactical proficiency, readiness, and morale of forces; the numbers and effectiveness of weapons; logistic factors; and a host of other considerations. Thus, dollar valuations are instructive as general indicators of changes in the military emphasis of a nation's forces over time. They are not sufficient to portray the comparative capabilities of forces. (The order-of-battle data provided with the dollar estimates will, however, give the reader some additional insight into the relative size and composition of the two forces.) 25X1

Dollar costs do not measure actual Soviet defense spending, the impact of defense on the economy, or the Soviet perception of defense activities. These issues are more appropriately analyzed with ruble expenditure estimates.[5] 25X1

Dollar costs do not measure relative manufacturing efficiencies in the defense industries. Estimated Soviet dollar costs are estimates of what it would cost US manufacturers to produce Soviet weapons. Thus, the dollar costs for both countries are based on US efficiencies. 25X1

Finally, cumulative dollar estimates for any single type of weapon do not represent stock value estimates, which would take into account depreciation, loss, retirement, and previously existing supplies. 25X1

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Types of Dollar Data

Dollar estimates can be used to make numerous types of defense activity comparisons. The data can be arrayed by resources, missions, and services, to name just a few. A comparison valid for analyzing some issues, however, may be inappropriate for others. Furthermore, the reader must remember that the level of uncertainty increases as the level of detail grows. This paper includes those Soviet and US dollar cost comparisons that are most often requested by our customers—totals, military resource categories, military missions, major missions by resource categories, and totals by US service.[6] Some special cases, such as the Soviet forces opposite China, are also included. 25X1

[6] These categories are defined in the individual sections that follow. 25X1

Total Defense Costs

For the 1970-79 period, the estimated cumulative dollar costs of all Soviet defense activities (less pensions) exceeded comparable US outlays by over 25 percent. Moreover, the major trends in the defense activities of the two countries were quite different:

- The estimated dollar costs of Soviet defense activities grew continuously throughout the period at an average rate of about 3 percent per year, with growth in nearly all the major missions of the defense establishment.
- Annual US defense outlays fell from 1970 until 1976. From then until the end of the period, they grew at an average rate of 2 percent as increases in RDT&E, procurement, and operations and maintenance costs offset continued declines in construction and personnel cost.

25X1

As a consequence, the estimated annual dollar costs of Soviet defense activities, which were slightly less than US defense outlays in 1970, surpassed them the next year, and by 1979 were 50 percent higher.

25X1

Other aggregations of defense activities show that:

- If uniformed personnel costs (which are based on relatively high US pay rates) are excluded from both sides, the estimated dollar costs of Soviet activities in 1979 exceeded US outlays by 35 percent.
- If RDT&E costs (which on the Soviet side are considerably less reliable than other parts of the total) are excluded from both sides, the estimated dollar costs of Soviet activities in 1979 exceeded US outlays by 40 percent.
- If pensions are included, the estimated dollar costs of Soviet activities exceeded US outlays by 40 percent in 1979. (Pensions are usually excluded, since they represent the cost of past, not current, defense activities.)

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Billion 1979 dollars	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative	Average Annual Growth Rate (%)
Total												
US	**140.4**	**127.6**	**117.0**	**111.0**	**108.4**	**106.4**	**104.6**	**106.4**	**108.1**	**111.5**	**1,141.3**	**−2.4**
USSR	**125.2**	**127.8**	**131.8**	**138.2**	**143.9**	**148.5**	**154.8**	**156.0**	**158.6**	**163.9**	**1,448.6**	**3.0**
Total less personnel												
US	96.6	88.0	82.0	78.6	76.8	75.9	75.0	77.4	79.5	83.0	813.0	−1.6
USSR	77.9	79.7	82.6	88.5	93.4	97.4	103.3	104.3	106.6	111.4	945.1	4.1
Total less RDT&E												
US	125.6	113.0	102.3	96.6	94.8	93.6	92.0	93.1	94.8	98.5	1,004.1	−2.6
USSR	111.4	113.6	116.5	121.4	125.5	128.3	132.8	132.3	133.7	137.2	1,252.6	2.3
Total plus pensions												
US	147.0	134.7	124.6	119.2	117.1	115.5	114.2	116.5	118.5	122.4	1,229.7	−1.9
USSR	130.1	133.1	137.3	144.1	150.2	155.1	161.8	163.2	166.2	171.8	1,512.8	3.1

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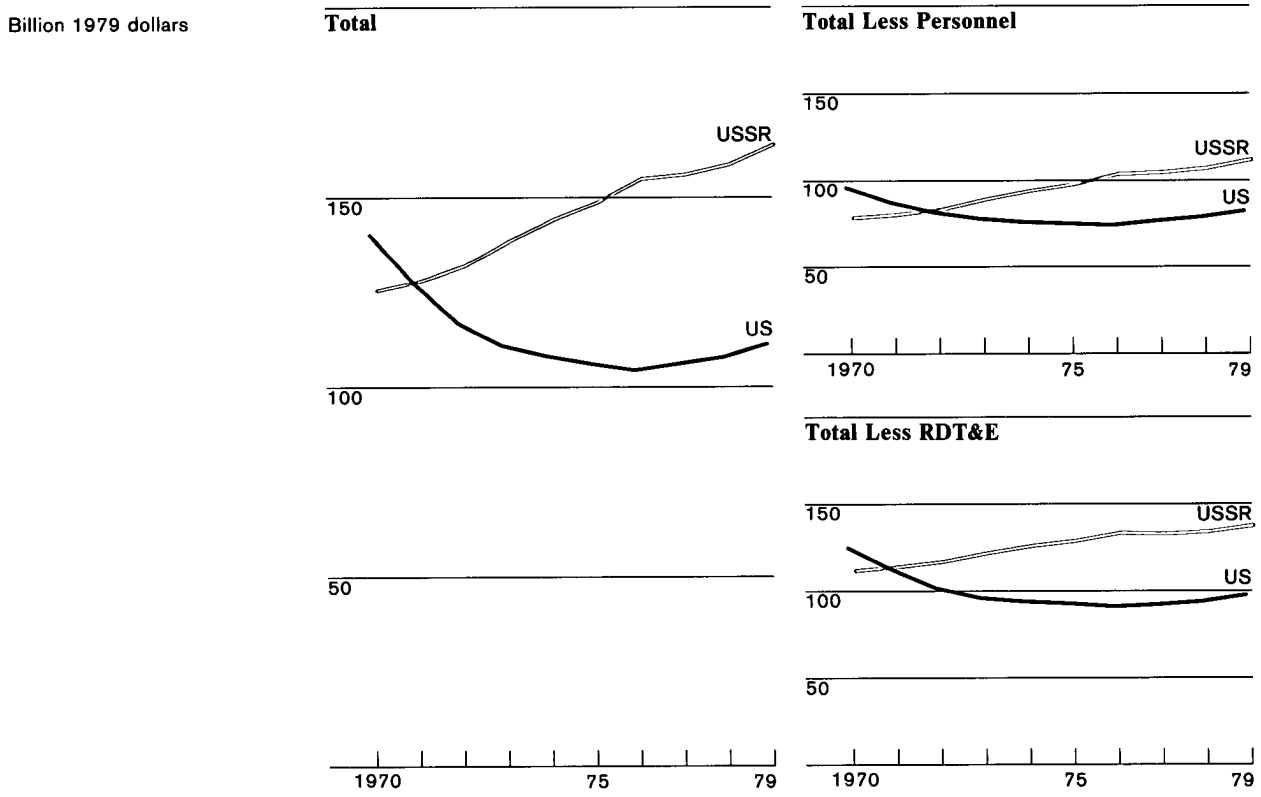
US and Soviet Defense Activities

A comparison of US outlays with estimated dollar costs of Soviet activities



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Soviet Forces Opposite China

Both the Soviet Union and the United States structure their forces not only for a major East-West war but also for other possible conflicts. For example, a substantial number of Soviet military units are deployed opposite China. We believe that these forces would not represent an immediate threat to NATO forces in the event of hostilities. Some could, however, be redeployed if the need should arise. 25X1

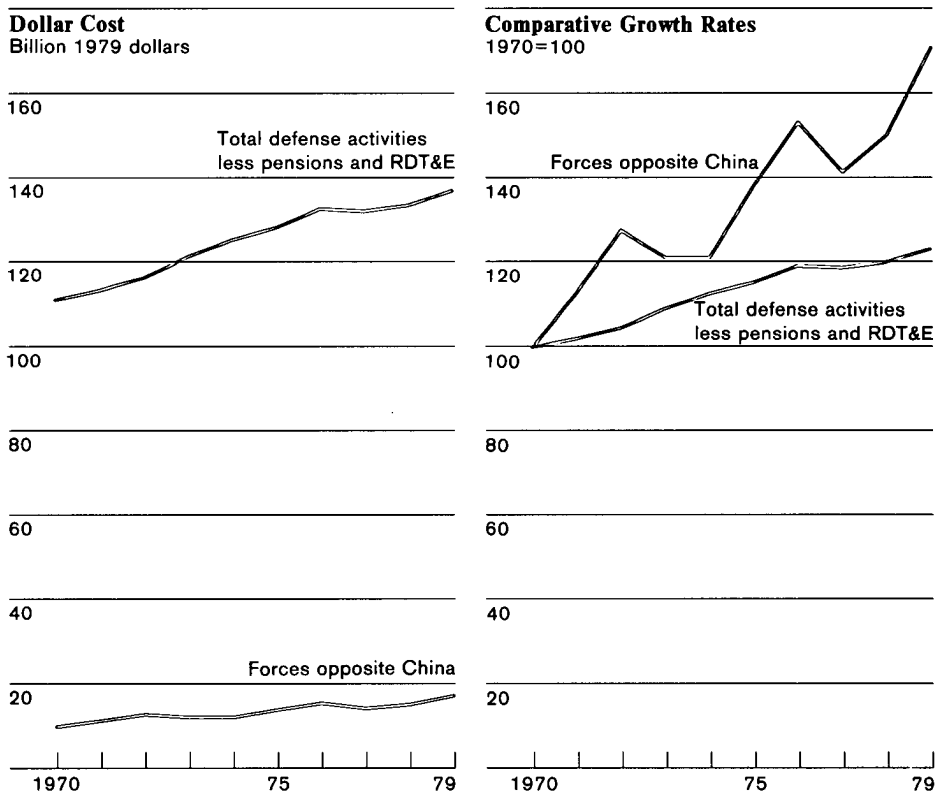
Our estimate of the dollar cost of forces opposite China is based on the order of battle for units and major weapon systems deployed with these units. The following units and weapon systems are included in this estimate:

- All ground forces units in the four eastern military districts and Mongolia, less one division on Kamchatka, two on Sakhalin, and miscellaneous units located in the far northeast.
- Tactical aviation aircraft in the Central Asian, Transbaikal, and Far East Military Districts and in Mongolia.
- All medium bombers and associated transport aircraft stationed at Belaya, Spassk-Dal'niy, Ussuriysk, and Zavitinsk NE airfields.
- All transport aircraft assigned to Military Transport Aviation units located in the Transbaikal, Siberian, and Central Asian Military Districts.
- All Air Defense Aviation aircraft, SAM sites, and radio-technical units in the Novosibirsk and Tashkent Air Defense Districts that are located within 300 nautical miles of the China border.
- All SS-20 missile launchers located along the Sino-Soviet border, plus SS-11 Mod-1 and Mod 2/3 launchers at Kostroma, Kozel'sk, Perm', Teykovo, and Yedrovo that are oriented toward China.
- All Z-conversion and G-class peripheral attack submarines in the Pacific Fleet.
- All Border Guard units along the Sino-Soviet border, plus those opposite Mongolia. 25X1

We estimate the share for the Soviet forces opposite China to be between 10 and 15 percent of the total dollar cost estimate for defense activities (minus RDT&E) [7] over the period 1970-79. The absolute amount devoted to forces opposite China increased from 10 billion dollars in 1970 to over 17 billion in 1979. This represents an average growth rate of 6 percent per year. Growth of total dollar expenditures (less RDT&E) for the same period averaged less than 3 percent per year. Approximately one-fourth of the absolute increase in this total was accounted for by forces opposite China. 25X1

[7] We cannot allocate RDT&E between forces opposite China and other areas. Therefore, we do not include it in the geographical comparisons. 25X1

Estimated Dollar Cost of Soviet Forces Opposite China



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Resource Comparisons

The comparison of Soviet and US defense activities presented in this section separates defense costs into the following resource categories:

- Investment costs—the dollar costs of activities to replace, modernize, or expand forces through the procurement of equipment, including major spare parts, and the construction of facilities.
- Operating costs—uniformed personnel costs and other costs associated with operating and maintaining equipment and facilities. These are directly related to the size of the forces and their level of activity.
- RDT&E costs—the costs of exploring new technology, developing new weapon systems, and improving existing systems.

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Estimated Dollar Costs of Soviet Resource Outlays As a Percent of Comparable US Outlays

	1979	1970-79 Total
Investment	165	150
Operating	130	115
RDT&E	205	145

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Billion 1979 dollars	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative	Average Annual Growth Rate (%)
US												
RDT&E	14.8	14.6	14.7	14.4	13.6	12.8	12.6	13.3	13.3	13.0	137.1	−1.3
Investment	38.9	33.0	29.1	27.2	25.5	24.5	24.3	25.6	26.8	29.8	284.9	−2.6
Operating	86.7	79.9	73.1	69.4	69.2	69.0	67.7	67.4	67.9	68.7	719.3	−2.5
Total	**140.4**	**127.6**	**117.0**	**111.0**	**108.4**	**106.4**	**104.6**	**106.4**	**108.1**	**111.5**	**1,141.3**	**−2.4**
USSR												
RDT&E	13.8	14.3	15.3	16.7	18.4	20.2	22.0	23.7	25.0	26.7	196.1	7.6
Investment	37.8	37.9	38.3	41.0	43.2	44.7	47.3	46.1	46.6	48.7	431.5	2.9
Operating	73.6	75.7	78.2	80.4	82.3	83.6	85.6	86.2	87.1	88.4	821.1	2.1
Total	**125.2**	**127.8**	**131.8**	**138.2**	**143.9**	**148.5**	**154.8**	**156.0**	**158.6**	**163.9**	**1,448.6**	**3.0**

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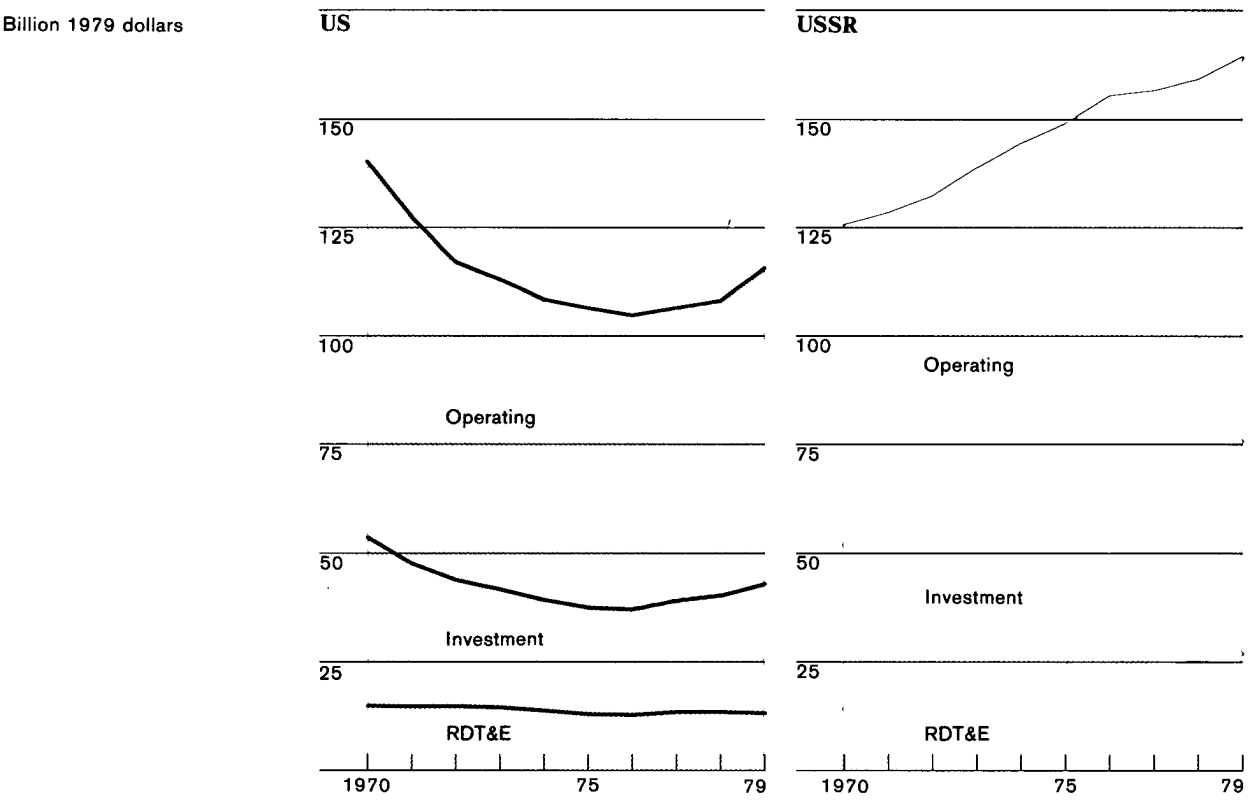
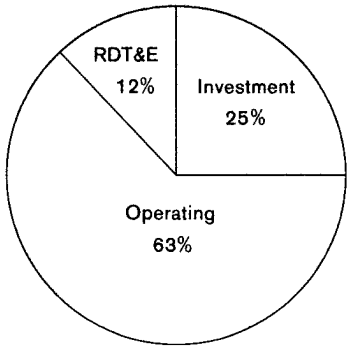
Military Resources

A comparison of US outlays with estimated dollar costs of Soviet activities

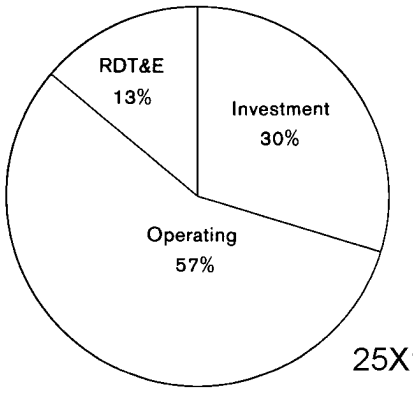


Cumulative, 1970-79

US
Total: $1,140



USSR
Total: $1,450



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Investment Costs

Investment costs can be divided into two subtotals:

- Procurement—the estimated cost of procuring weapon systems and support equipment, including major spare parts.
- Construction—the estimated cost of constructing the required defense facilities. 25X1

For the 1970-79 decade, the estimated cumulative dollar costs of Soviet investment were 50 percent greater than US investment. Cumulative procurement estimates (approximately 90 percent of total investment for both countries) were 45 percent greater; cumulative construction estimates were twice as great. 25X1

The trends of investment costs in the two countries were dissimilar from the beginning of the decade until 1976. US investment fell by one-third while estimated Soviet investment grew by one-fourth. Since 1976, however, these US outlays have grown 7 percent per year while estimated Soviet investment actually declined for one year before turning up at the end of the decade. One procurement cycle for Soviet strategic weapons ended in 1977-78; another began at the end of the decade. 25X1

Our estimates of Soviet procurement grew by one-third over the entire period. Missile procurement increased 85 percent; aircraft procurement, 35 percent; and ship procurement, 15 percent. Procurement of land armaments showed no significant change. 25X1

US procurement over the period fell by one-fourth despite the recent growth. 25X1

The estimates for Soviet construction costs are currently being revised. We expect the new total, which will be included in our next unclassified paper, to be about half again as much as our present estimates. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Procurement	36.3	30.6	26.8	24.7	22.9	21.7	21.4	23.0	24.6	27.7	259.6
Construction	2.6	2.4	2.4	2.5	2.6	2.9	2.9	2.7	2.3	2.1	25.3
Total	**38.9**	**33.0**	**29.1**	**27.2**	**25.5**	**24.5**	**24.3**	**25.6**	**26.8**	**29.8**	**284.9**
USSR											
Procurement	32.4	32.9	33.3	36.0	38.2	39.7	42.2	41.1	41.5	43.7	380.9
Construction	5.4	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	50.7
Total	**37.8**	**37.9**	**38.3**	**41.0**	**43.2**	**44.7**	**47.3**	**46.1**	**46.6**	**48.7**	**431.5**

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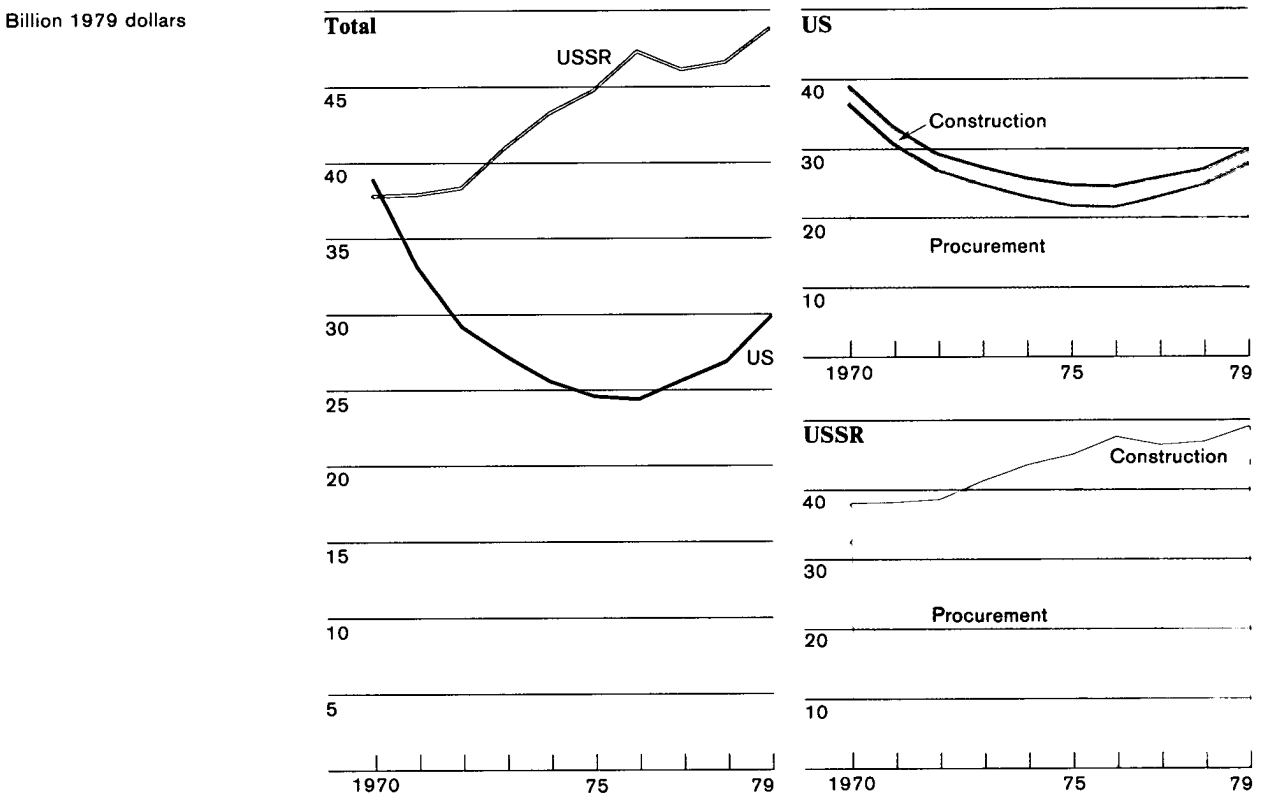
Military Investment

A comparison of US outlays with estimated dollar costs of Soviet activities



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Operating Costs

Operating costs can be divided into two subtotals:

- Uniformed personnel costs, which include food, clothing, travel, and other pay and allowances for active and reserve military manpower. (Retirement pay is not included.)
- O&M costs, which include all costs of operating and maintaining military equipment and facilities. 25X1

Estimated cumulative dollar costs of operating the Soviet forces were slightly higher than corresponding US outlays for the 1970-79 period. Cumulative personnel costs were 55 percent higher; cumulative O&M costs were 20 percent lower. 25X1

The trends in operating costs over the period were different for the two countries. The estimated dollar costs of operating the Soviet forces grew continuously over the period and in 1979 were 20 percent higher than they had been in 1970. In contrast, corresponding US outlays fell sharply until 1973 and have remained constant since then. US outlays fell by 20 percent over the decade. 25X1

Estimated dollar costs of Soviet O&M grew at a more rapid rate than personnel costs, but both increased over the period. The rapid growth rate of Soviet O&M costs was caused by the increasing complexity of Soviet weapons, particularly aircraft and ships, and the resultant higher maintenance costs. 25X1

US personnel costs fell in every year of the period but the last. US O&M costs fell until 1973 but have grown since then. O&M costs for the Army and the Air Force were lower in 1979 than they had been in 1970; O&M costs for the Navy were higher. 25X1

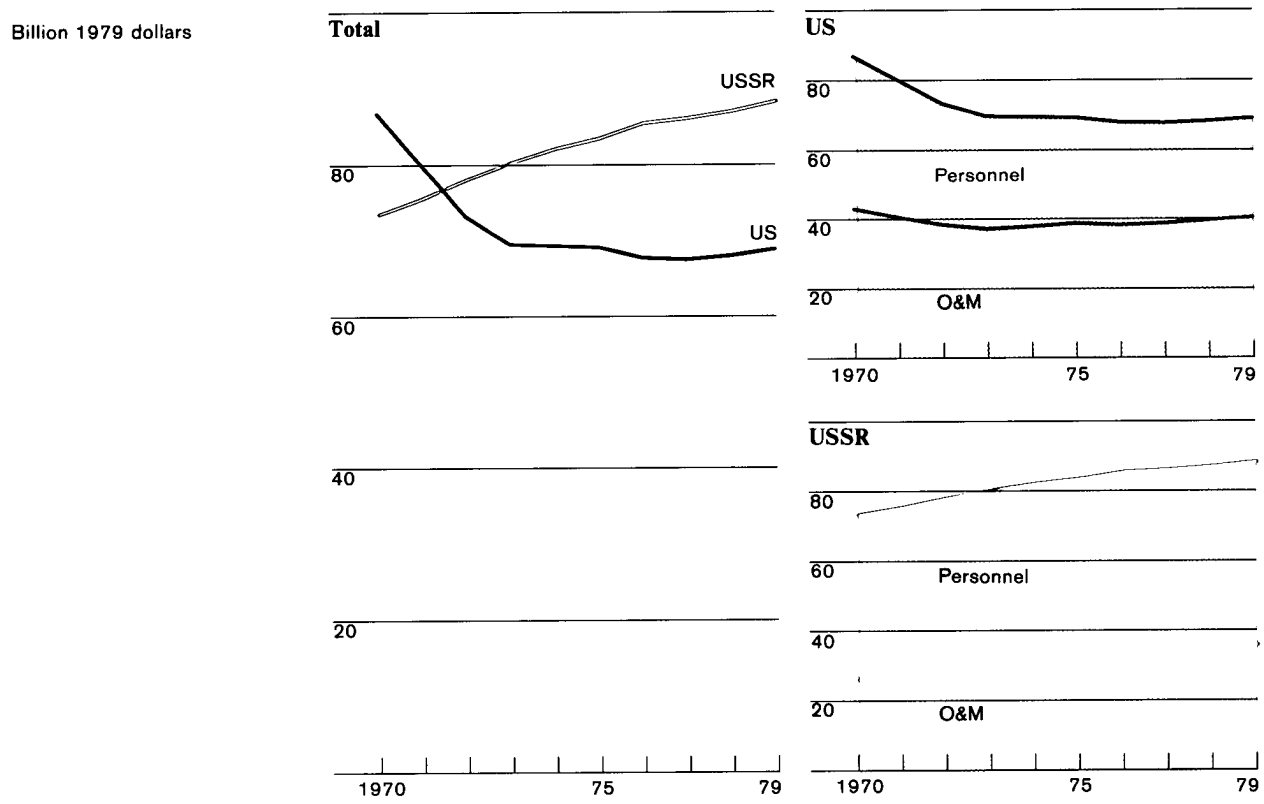
In 1979 estimated dollar costs of operating the Soviet forces exceeded US outlays by 30 percent, whereas they were 85 percent of US outlays in 1970. Estimated personnel costs were 85 percent higher than US outlays in 1979; O&M costs were approximately equal. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Personnel	43.8	39.6	34.9	32.4	31.5	30.5	29.6	28.9	28.5	28.5	328.2
O&M	43.0	40.4	38.2	37.0	37.7	38.6	38.1	38.5	39.4	40.2	391.0
Total	**86.7**	**79.9**	**73.1**	**69.4**	**69.2**	**69.0**	**67.7**	**67.4**	**67.9**	**68.7**	**719.3**
USSR											
Personnel	47.3	48.2	49.2	49.6	50.5	51.1	51.6	51.7	52.0	52.4	503.5
O&M	26.3	27.5	29.0	30.8	31.8	32.5	34.0	34.5	35.1	36.0	317.5
Total	**73.6**	**75.7**	**78.2**	**80.4**	**82.3**	**83.6**	**85.6**	**86.2**	**87.1**	**88.4**	**821.1**

25X1

Operating Activities

A comparison of US outlays with estimated dollar costs of Soviet activities



25X1

582849 9-80 CIA

Research, Development, Testing, and Evaluation

Estimates of the dollar costs of Soviet RDT&E are derived in the aggregate using a less certain methodology and, therefore, should be considered less reliable than the other estimates in this assessment. Nevertheless, the available information on particular RDT&E projects, published Soviet statistics on science, and statements by Soviet authorities on the financing of research indicate that military RDT&E expenditures were both large and growing during the 1970-79 decade. Independent evidence on increases in the manpower and facilities devoted to Soviet military RDT&E programs reinforces this assessment and convinces us that Soviet RDT&E is clearly larger in terms of inputs than that of the US. Floorspace and manpower both increased by one-fourth over the decade. 25X1

Soviet RDT&E continued at a high level in 1979. We estimate that the Soviets have over 50 new or modified aircraft, missiles, naval ships, and space systems in flight-testing or trials. Also we have identified a number of development programs that have not yet reached the flight test or trial stage. These include new combat and support aircraft; new or modified strategic attack, surface-to-air, antitank, and naval cruise missiles; advanced naval surface ships and submarines; ground force weapons, including a new tank; and new space systems. 25X1

25X1

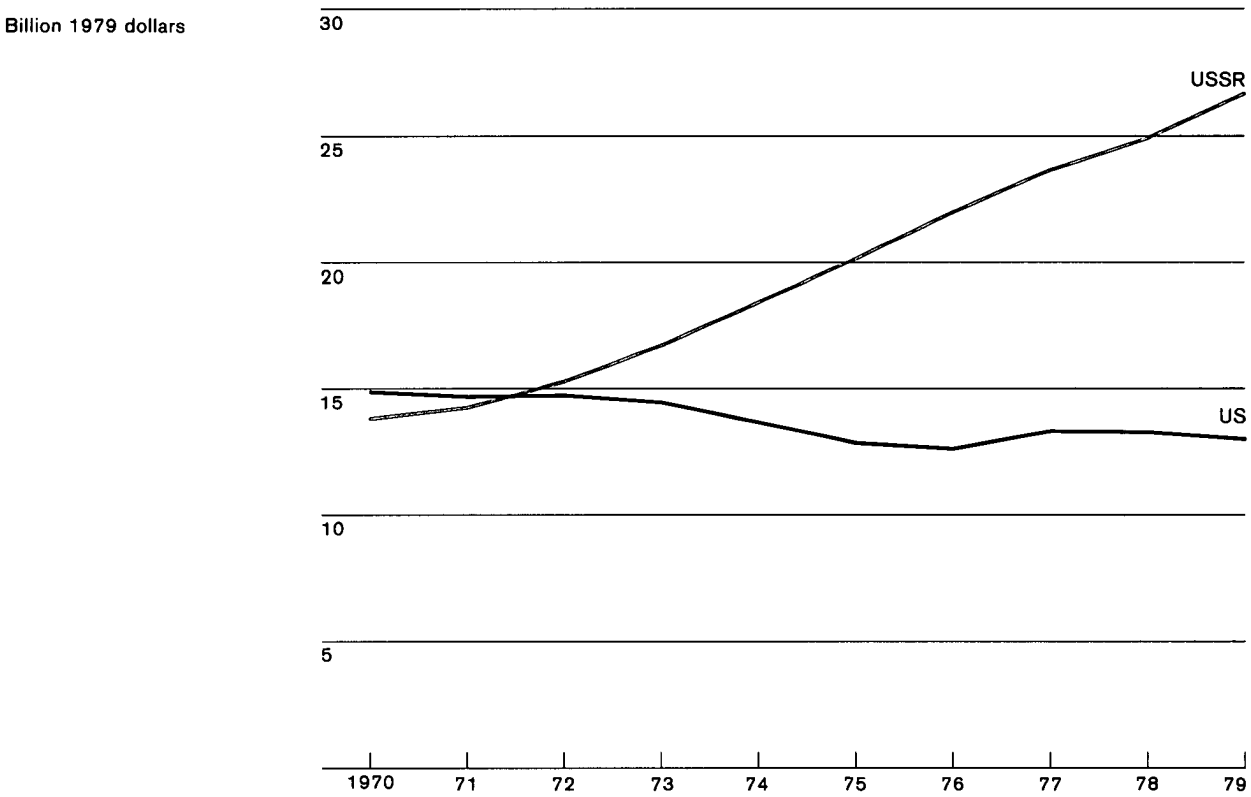
US outlays for RDT&E declined from the beginning of the period until 1976 and then leveled off for the rest of the period. For the period as a whole, the estimated cumulative dollar costs of Soviet RDT&E activities were 50 percent larger than US outlays for comparable activities. In 1979 they were twice as large as corresponding US outlays. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US	14.8	14.6	14.7	14.4	13.6	12.8	12.6	13.3	13.3	13.0	137.1
USSR	13.8	14.3	15.3	16.7	18.4	20.2	22.0	23.7	25.0	26.7	196.1

25X1

Research, Development, Testing, and Evaluation

A comparison of US outlays with estimated dollar costs of Soviet activities



25X1

582850 9-80

Military Mission Comparisons

Mission comparisons presented here are organized in accordance with the November 1979 version of the *Defense Planning and Programing Categories (DPPC)* of the US Department of Defense. This allows the presentation of US and Soviet force and spending comparisons in terms familiar to US defense planners, reviewers, and policymakers. These definitions do not, of course, correspond to the way the USSR organizes its military missions or allocates its defense resources. Further, these dollar costs for mission comparisons do not include any RDT&E expenditures. Soviet RDT&E costs cannot be divided by missions; we are able to estimate only the total (shown in the preceding section).

25X1

In the sections that follow we show the major missions divided into each of their components (for example, the general purpose mission is divided into land, tactical air, naval, and mobility forces). Line graphs are used to show the movements of dollar costs over time, and pie charts show the distribution of cumulative component costs between investment, operations and maintenance, and personnel for the 1970-79 decade.

25X1

Soviet Defense Missions as a Percent of Comparable US Defense Outlays

Percent

	1979	1970-79 Total
Strategic forces	320	300
General purpose forces	160	150
Support forces	95	80
Total (excluding RDT&E)	**140**	**125**

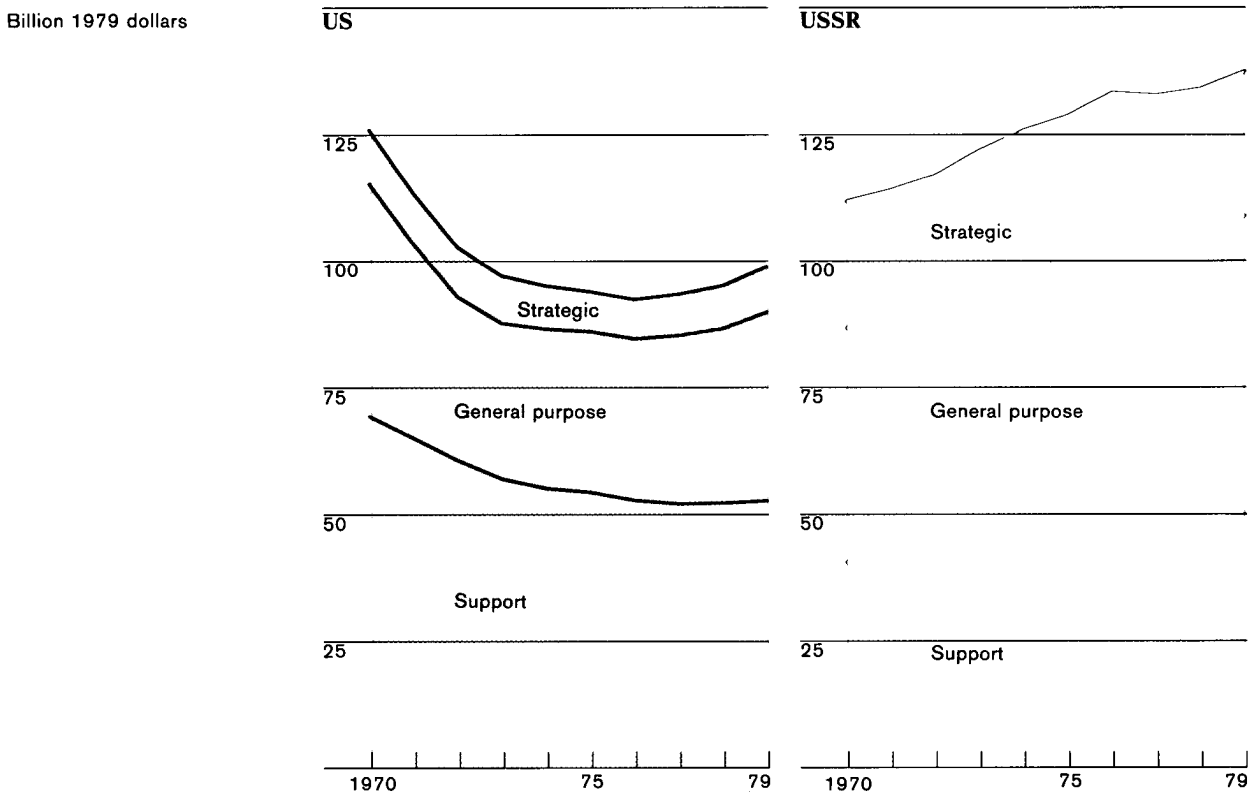
25X1

Billion 1979 dollars	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative	Average Annual Growth Rate (%)
US												
Strategic	10.7	10.1	9.8	9.4	8.6	7.9	7.7	8.2	8.5	9.0	89.8	−1.8
General purpose	45.9	38.3	32.3	30.7	31.4	31.7	31.9	33.3	34.4	37.3	347.2	−1.9
Support	68.9	64.6	60.2	56.5	54.8	54.0	52.4	51.6	51.8	52.3	567.1	−3.0
Total	**125.6**	**113.0**	**102.3**	**96.6**	**94.8**	**93.6**	**92.0**	**93.1**	**94.8**	**98.5**	**1,004.1**	**−2.6**
USSR												
Strategic	25.1	24.2	23.7	25.7	27.8	28.1	28.8	28.8	28.6	28.6	269.4	1.5
General purpose	46.2	47.9	49.3	50.3	50.9	52.8	55.0	55.1	56.8	58.9	523.2	2.7
Support	40.1	41.6	43.4	45.4	46.8	47.4	49.0	48.4	48.2	49.7	460.0	2.4
Total	**111.4**	**113.6**	**116.5**	**121.4**	**125.5**	**128.3**	**132.8**	**132.3**	**133.7**	**137.2**	**1,252.6**	**2.3**

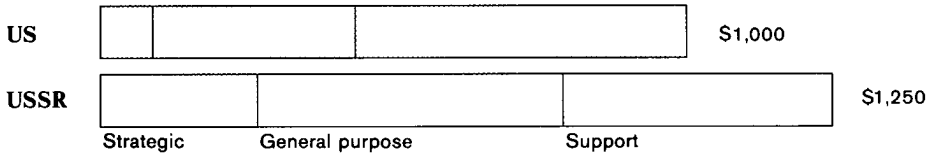
25X1

Major Missions

A comparison of US outlays with estimated dollar costs of Soviet activities



Cumulative, 1970–79



25X1

582851 9-80

For the 1970-79 decade, estimated cumulative dollar costs of all Soviet defense missions (strategic, general purpose, and support) exceeded comparable US outlays by 25 percent. US outlays fell by two and one half percent per year over the period while estimated Soviet dollar costs for the major missions grew by about two and one half percent per year. 25X1

There were considerable differences in the mission trends of the two countries. The estimated annual dollar cost of Soviet missions grew by about 25 percent over the 1970-79 decade:

- The dollar costs of Soviet strategic forces grew slowly over the period (15 percent), although there was considerable fluctuation of ICBM, ballistic missile submarine, and strategic air defense activities, largely because of the cyclical nature of procurement.
- The costs of Soviet general purpose forces grew more rapidly over the period (25 percent), reflecting in large part the military buildup along the Sino-Soviet border and within the Warsaw Pact areas and the acquisition of more costly systems.
- The costs of Soviet support forces also grew rapidly over the decade (25 percent) as a consequence of the need to train, supply, and maintain personnel and equipment in the growing strategic and general purpose missions. 25X1

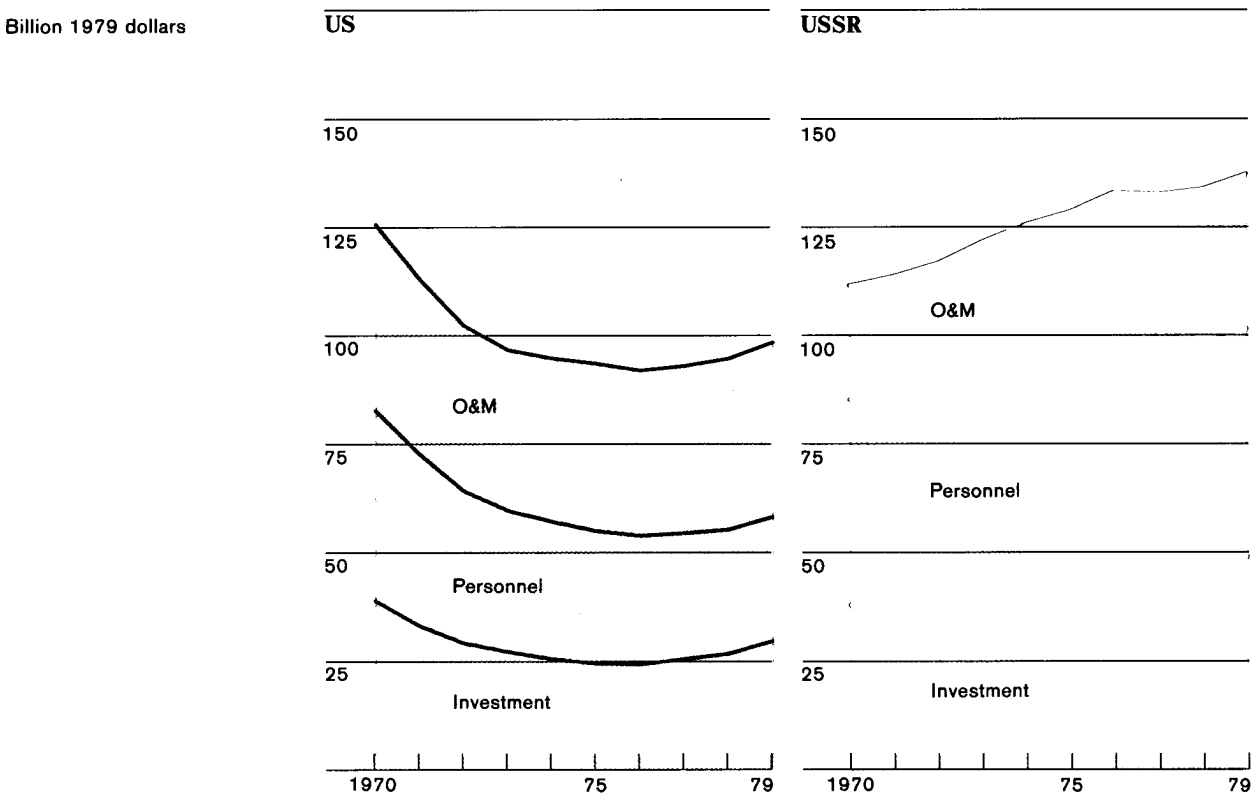
By 1976, US mission activities had declined over 25 percent from the level in 1970. The major percentage decline was for general purpose forces. Outlays for mission activities did increase by 5 percent over the last three years of the period:

- Outlays for strategic forces fell by almost 30 percent from 1970 to 1976 before increasing by 15 percent over the last three years of the period as the US began to invest in the Trident SSBN program.
- Outlays for general purpose forces fell by 35 percent between 1970 and 1973, stayed relatively constant for the next three years, and grew by 15 percent over the last three years of the period.
- Outlays for support forces fell until 1977, decreasing by approximately 25 percent. 25X1

The estimated dollar costs of all missions were distributed fairly evenly among the three resource categories for both countries over the decade. Personnel costs absorbed the largest share of estimated Soviet dollar costs; O&M costs took the largest share of US mission outlays. 25X1

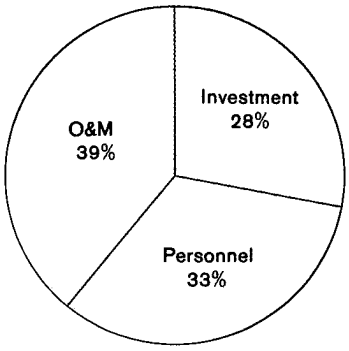
Major Missions by Resource Category

A comparison of US outlays with estimated dollar costs of Soviet activities

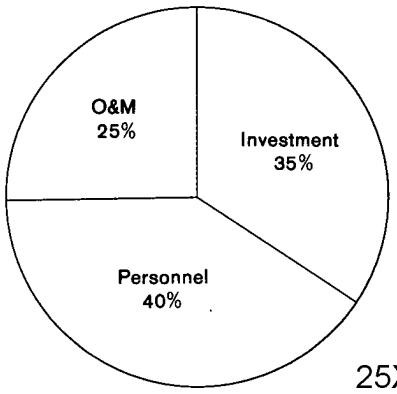


Cumulative, 1970–79

US
Total: $1,000



USSR
Total: $1,250



25X1

582852 9-80 CIA

Strategic Forces

Strategic forces are defined to include strategic offense (intercontinental and peripheral attack), strategic defense, strategic control and surveillance, and nuclear weapons. (Although the last is not a DPPC category, we include all nuclear weapon costs with strategic forces.) 25X1

Over the decade, the estimated cumulative dollar costs of Soviet strategic force activities (exclusive of RDT&E) were three times as large as comparable US outlays. This also was the ratio in 1979. 25X1

The differences were largely the result of the widely different circumstances of the two countries during the period. The Soviet Union faced a potential threat along its border from non-US forces and, at the beginning of the period, a US strategic offensive force (including a significant force of intercontinental bombers) that was considerably stronger than its Soviet counterpart 25X1

Consequently, Soviet strategic activities during the period were characterized by:

- Maintenance and improvement of a peripheral attack force, for which the United States has no counterpart.
- Continued emphasis on forces for strategic defense against bomber attack.
- Substantial expansion and improvement of ICBM and submarine-launched ballistic missile forces, resulting in rough parity with the US strategic attack forces by the end of the period. 25X1

US strategic programs, on the other hand, were characterized by:

- Qualitative—as opposed to quantitative—improvement in the ICBM, SLBM, and heavy bomber forces.
- A reduction in the number of heavy bombers.
- The deployment of an ABM system that was quickly abandoned.
- A continuing reduction in strategic interceptor and SAM forces. 25X1

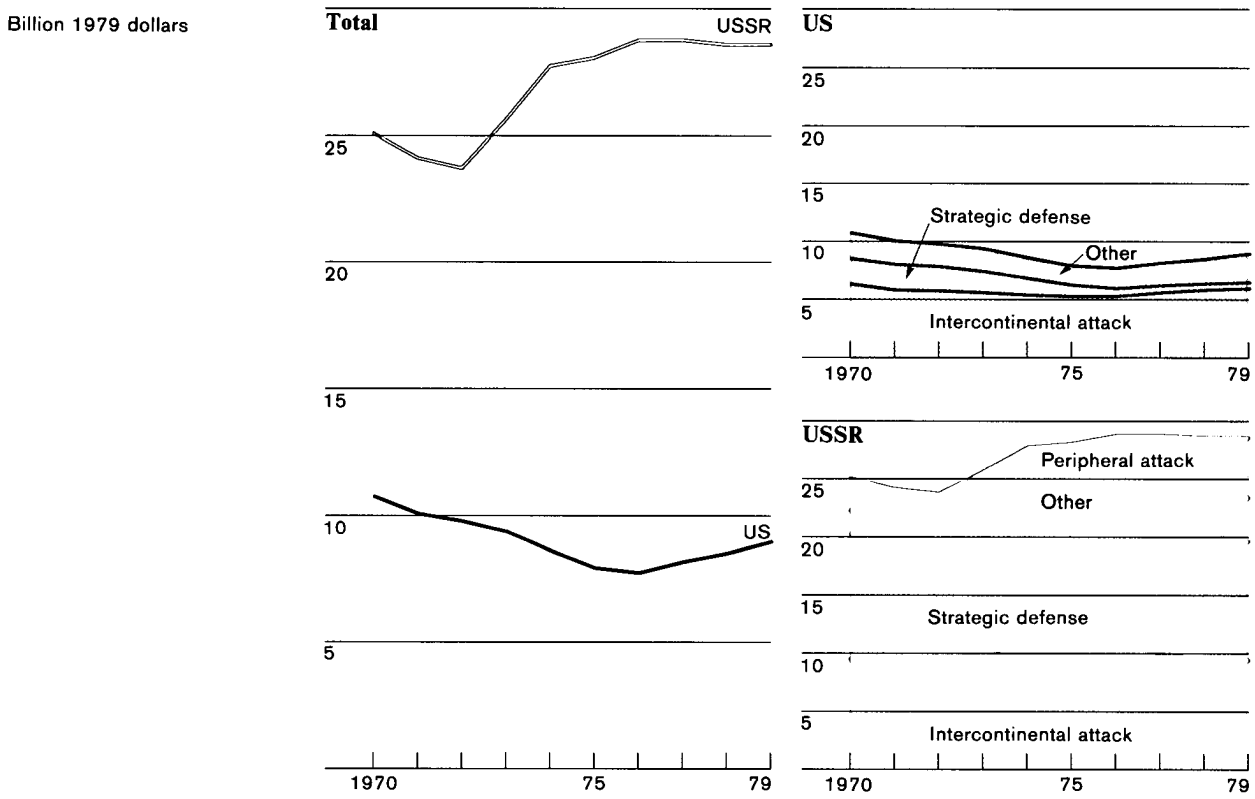
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Intercontinental attack	6.4	5.8	5.8	5.6	5.4	5.3	5.3	5.6	5.9	6.0	57.1
Strategic defense	2.2	2.2	2.1	1.8	1.4	1.0	0.7	0.6	0.6	0.5	13.1
Other [1]	2.2	2.0	1.9	1.9	1.8	1.6	1.7	1.9	2.1	2.5	19.6
Total	**10.7**	**10.1**	**9.8**	**9.4**	**8.6**	**7.9**	**7.7**	**8.2**	**8.5**	**9.0**	**89.8**
USSR											
Intercontinental attack	9.5	8.1	8.0	9.6	11.3	11.3	11.0	10.0	9.6	9.4	97.8
Peripheral attack	2.8	3.1	3.3	3.1	3.1	3.4	4.0	4.3	4.6	5.2	37.0
Strategic defense	10.8	10.8	10.1	10.4	10.5	10.1	10.5	11.2	10.8	10.2	105.3
Other [1]	2.1	2.1	2.3	2.6	2.8	3.3	3.3	3.3	3.6	3.8	29.3
Total	**25.1**	**24.2**	**23.7**	**25.7**	**27.8**	**28.1**	**28.8**	**28.8**	**28.6**	**28.6**	**269.4**

[1] The category "other" includes nuclear weapons and strategic control and surveillance.

25X1

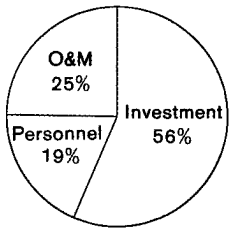
Strategic Forces

A comparison of US outlays with estimated dollar costs of Soviet activities

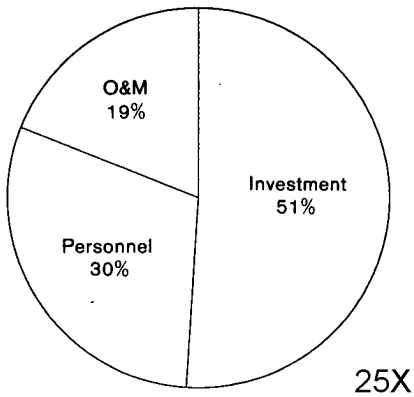


Cumulative, 1970–79

US
Total: $90



USSR
Total: $270



25X1

582853 9-80 CIA

Intercontinental Attack Forces

This mission consists of all land-based intercontinental ballistic missile forces, intercontinental ballistic missile submarines and the associated missiles, and intercontinental bombers. 25X1

Over the decade the estimated cumulative dollar costs of the Soviet intercontinental attack forces exceeded comparable US outlays by 70 percent. In 1979 estimated Soviet dollar costs exceeded US outlays by 55 percent:

- Estimated dollar costs of the Soviet intercontinental attack mission were approximately the same at the end as at the beginning of the period; they were considerably larger in the middle seventies, however, primarily because of the procurement of SS-17s, -18s, and -19s and D-class SSBNs.

- US spending for intercontinental attack forces fell until 1975 as both procurement and operating costs, particularly of intercontinental bombers, were cut. However, US spending for this mission grew by 3 percent a year from 1976 until the end of the decade as the United States began to invest in the Trident SSBN program. 25X1

As a result of these trends, the USSR during the period:

- Overtook the United States in number of delivery vehicles but remained behind it in total online missile reentry vehicles and bomber weapons.
- Overtook and far surpassed the United States in total missile and bomber equivalent throw weight, yield, and equivalent megatons. 25X1

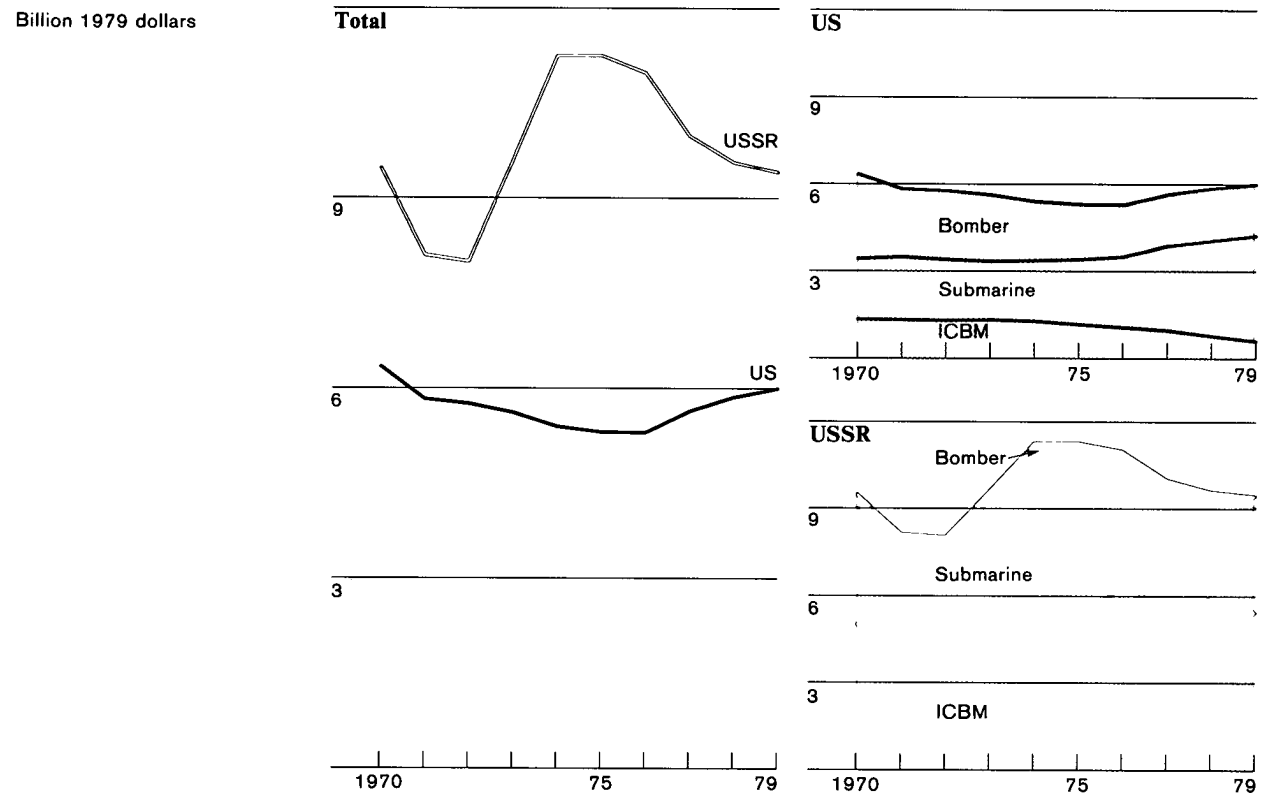
Because investment costs were over half the total in both countries, their trend set the pattern for total costs. Soviet investment displayed the cyclical pattern already noted, while US spending for intercontinental attack forces fell until procurement costs for the Trident SSBN caused them to rise. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
ICBMs	1.4	1.3	1.3	1.3	1.3	1.2	1.1	1.0	0.8	0.6	11.2
Submarines	2.1	2.2	2.1	2.0	2.1	2.2	2.4	2.9	3.3	3.6	25.0
Bombers	2.9	2.3	2.4	2.3	2.0	1.9	1.8	1.8	1.8	1.8	20.9
Total	**6.4**	**5.8**	**5.8**	**5.6**	**5.4**	**5.3**	**5.3**	**5.6**	**5.9**	**6.0**	**57.1**
USSR											
ICBMs	5.0	4.0	3.7	4.7	5.5	5.7	6.1	5.9	6.0	5.4	52.0
Submarines	4.0	3.7	3.8	4.5	5.3	5.2	4.5	3.7	3.2	3.6	41.6
Bombers	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.1
Total	**9.5**	**8.1**	**8.0**	**9.6**	**11.3**	**11.3**	**11.0**	**10.0**	**9.6**	**9.4**	**97.8**

25X1

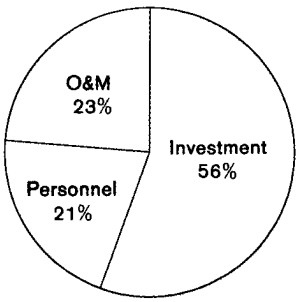
Intercontinental Attack Forces

A comparison of US outlays with estimated dollar costs of Soviet activities

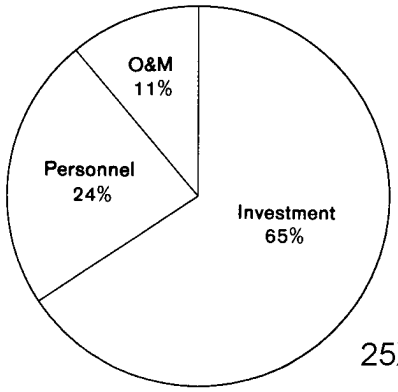


Cumulative, 1970–79

US
Total: $55



USSR
Total: $100



25X1

582854 9-80 CIA

Intercontinental Ballistic Missiles. The estimated cumulative dollar costs of Soviet ICBM activities for the decade were almost five times as large as corresponding US outlays. In 1979, estimated Soviet dollar costs exceeded US outlays by a factor of eight. 25X1

The difference reflects the extensive modernization of Soviet ICBM forces; the total number of launchers increased only slightly:

- In the early 1970s the Soviets expanded their SS-9, SS-11, and SS-13 ICBM forces by a total of 250 launchers.
- In the middle 1970s the Soviets began to replace their original force of SS-9 and SS-11 ICBMs. The single-RV SS-11 was replaced with improved variants (the Mod 2 and the Mod 3) as well as with two new ICBM systems—the SS-17 and the SS-19. The single-RV SS-9 was replaced with a new ICBM—the SS-18. Each of the new systems had more accurate, MIRVed warheads and was deployed in a harder, more survivable silo.
- By the end of the decade the Soviets had deployed 540 SS-11 Mod 2 and Mod 3 variants as well as nearly 500 new SS-17, SS-18, and SS-19 launchers. These, however, took the place of older systems so there were only about 100 more launchers in 1979 than there had been in 1970. 25X1

The United States, on the other hand, maintained the same number of ICBM launchers, but improved this force by:

- Deploying the more accurate and MIRVed Minuteman III ICBMs. These replaced Minuteman I missiles and 50 of the Minuteman II missiles.
- Retrofitting all Minuteman III ICBMs with an improved guidance system.
- Hardening the existing ICBM silos and improving command and control capabilities. Among the specific improvements were better suspension systems for the missiles and ground electronics, debris bins on the launch closures to protect the silos from postattack debris, improved protection from electromagnetic pulses, and more advanced retargeting capabilities. 25X1

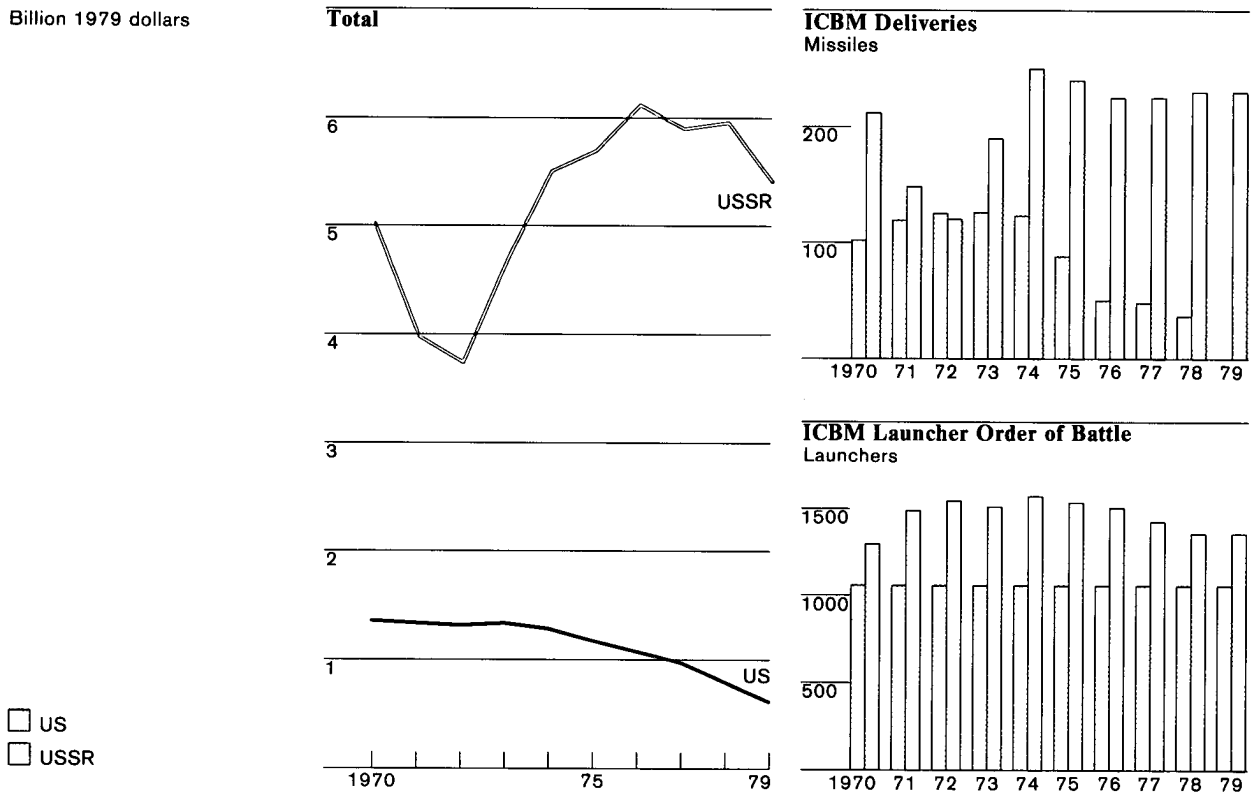
In 1979 the US ICBM forces consisted of 550 Minuteman IIIs, each having three RVs, 450 Minuteman IIs with a single RV, and 54 older liquid-fueled Titan IIs with a single RV. The Titan II lacks the accuracy of the Minuteman but carries a larger payload. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US	1.4	1.3	1.3	1.3	1.3	1.2	1.1	1.0	0.8	0.6	11.2
USSR	5.0	4.0	3.7	4.7	5.5	5.7	6.1	5.9	6.0	5.4	52.0

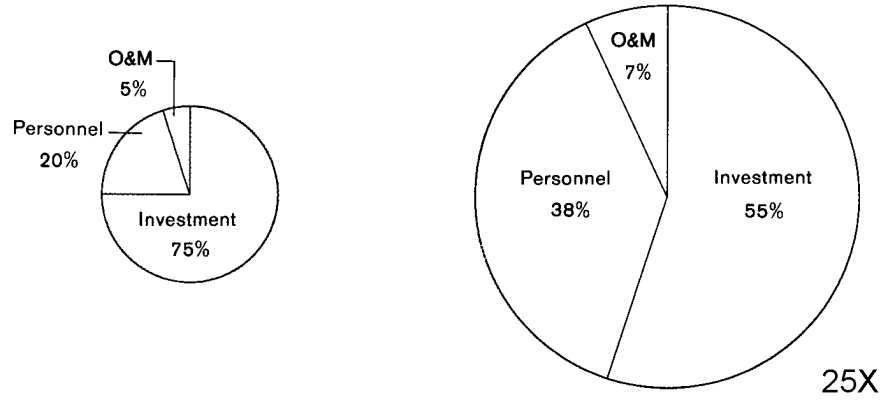
25X1

Intercontinental Ballistic Missiles

A comparison of US outlays with estimated dollar costs of Soviet activities



Cumulative, 1970–79



25X1

582855 9-80 CIA

Ballistic Missile Submarines for Intercontinental Attack. This component includes all US ballistic missile submarines and the associated missiles and those Soviet ballistic missile submarines and missiles that are believed to have an intercontinental, rather than a peripheral, attack mission. Also included on both sides are the SSBN tenders. 25X1

The estimated cumulative dollar costs of these Soviet activities were about 65 percent greater than the corresponding US outlays over the decade. In 1979, however, US outlays were equal to the estimated dollar cost of this Soviet mission. 25X1

Although the estimated dollar costs of Soviet SLBM forces were just slightly less in 1979 than they had been in 1970, this figure fluctuated during the decade in relation to procurement cycles for SSBNs. Procurement of the Y-class SSBN ended in the early seventies; the procurement of the D-class peaked in the middle seventies. 25X1

Annual US SSBN outlays were relatively constant from 1970 through 1974 because the procurement programs for the present US SSBN force were completed before 1970. The procurement of new types of SLBMs in the early 1970s did not cause a large increase then, but the start of the Trident program did cause almost a 70-percent increase over the last five years of the decade. 25X1

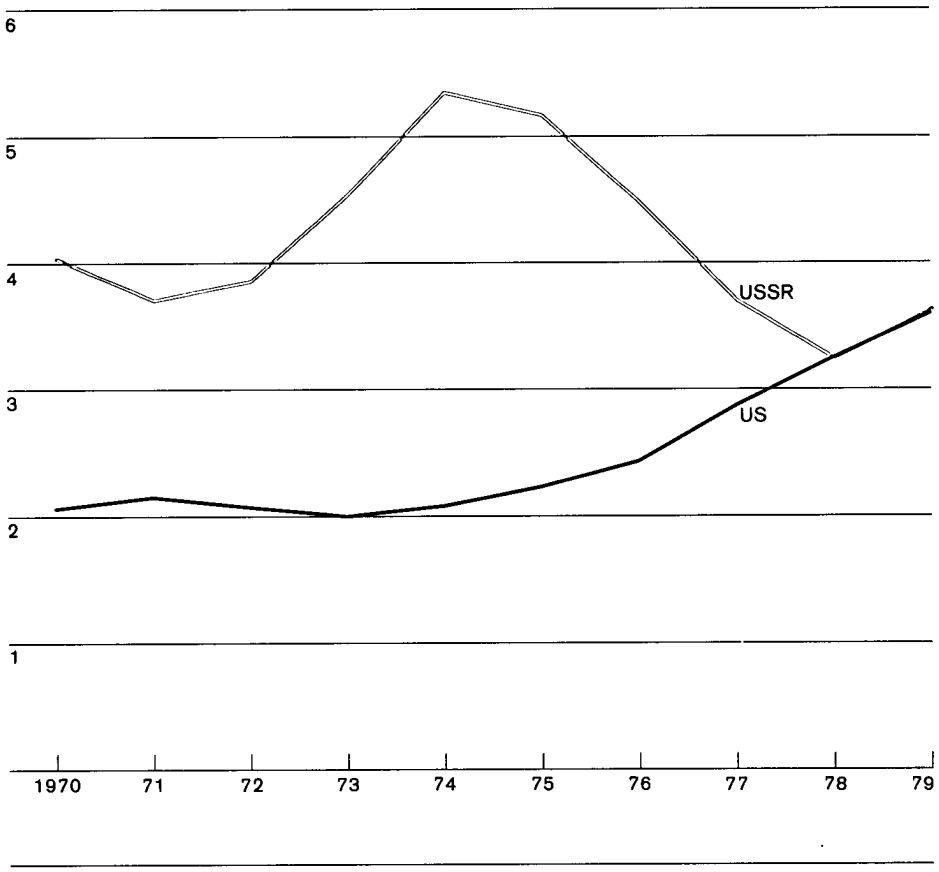
As is usually the case for strategic missions, investment costs dominated both the totals and the trends over time for both countries. Estimated procurement costs were especially significant for this Soviet mission. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US	2.1	2.2	2.1	2.0	2.1	2.2	2.4	2.9	3.3	3.6	25.0
USSR	4.0	3.7	3.8	4.5	5.3	5.2	4.5	3.7	3.2	3.6	41.6

25X1

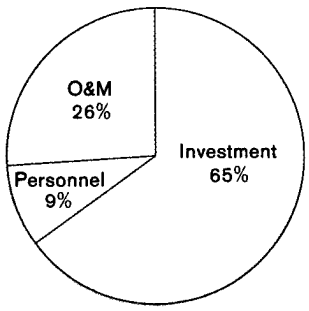
Submarines for Intercontinental Attack

A comparison of US outlays with estimated dollar costs of Soviet activities

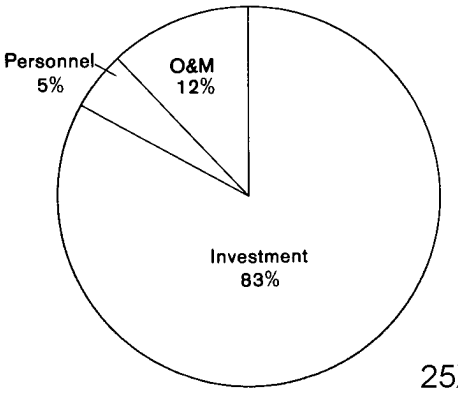


Cumulative, 1970–79

US
Total: $25



USSR
Total: $42



25X1

582856 9-80 CIA

The Soviet SSBN force more than doubled during the decade, increasing from 31 to 67 SSBNs:

- From 1970 to 1975, the Soviet Union deployed an additional 28 Y-class submarines.
- A total of 31 D-I, D-II, and D-III submarines were deployed between 1973 and the end of the decade.
- In 1977, in order to comply with SALT I limitations on the number of SLBM launchers, the USSR began to retire the older Y-I ballistic missile submarines as it deployed D-III submarines.
- Although no Typhoon-class SSBN has yet been deployed, procurement costs associated with this system began in the late seventies. [redacted] 25X1

The United States did not expand its fleet of 41 SLBM submarines during the seventies. The force, however, was steadily improved:

- In the early 1970s many US ballistic missile submarines were converted to carry a new SLBM, the Poseidon C-3.
- In 1976 the United States began construction of a new class of SSBNs to carry the new Trident SLBM, which has a longer range and a more powerful warhead. The first SSBN of that program (the Ohio) is intended for delivery early next year, and the second (the Michigan) has been launched.
- The Trident C-4 missile is being backfitted on the older Benjamin Franklin–class SSBNs. [redacted] 25X1

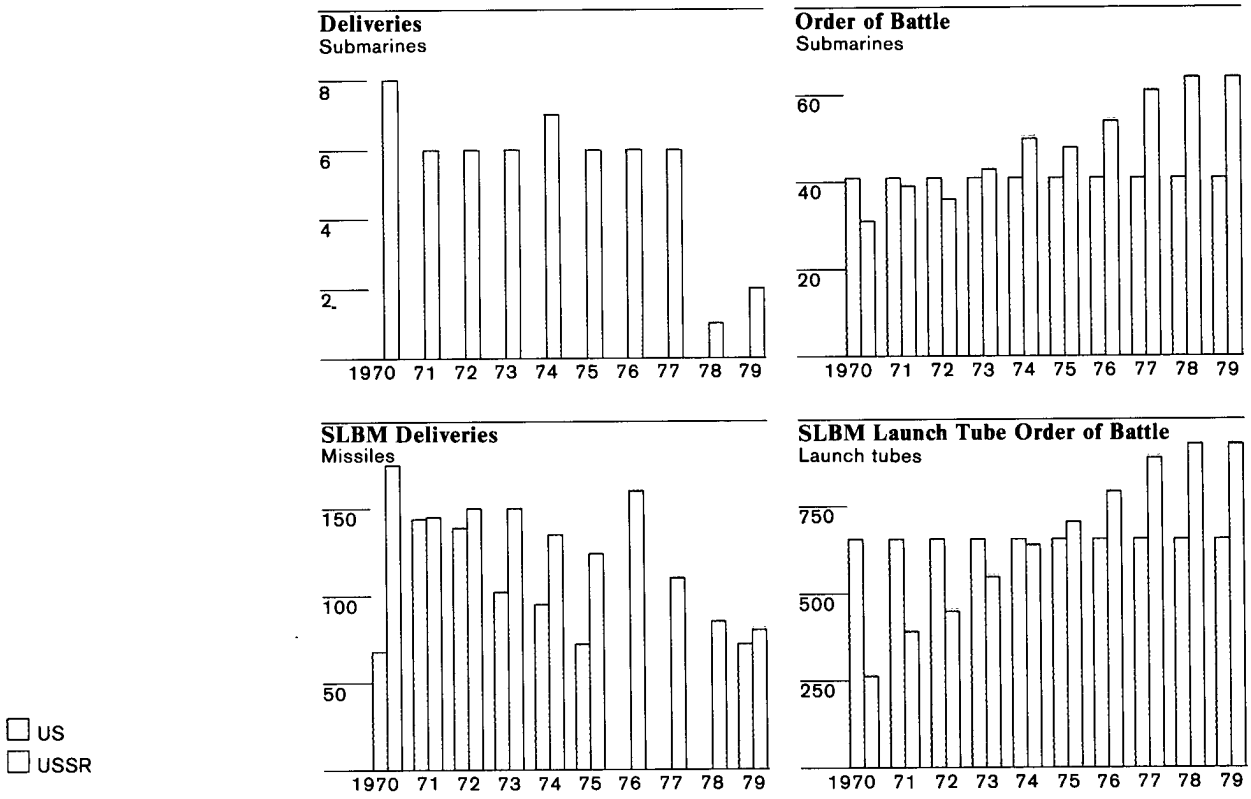
In 1979 the US had 41 SSBNs with 16 tubes each for a total of 656 tubes. Thirty of these submarines were equipped with the Poseidon C-3 SLBM or were being converted to the Trident C-4. By the end of 1979, one Benjamin Franklin–class SSBN had completed conversion and been deployed. The remaining 10 SSBNs were armed with the Polaris A-3. [redacted] 25X1

The Poseidon C-3 has a warhead with up to 14 MIRVs in contrast to its predecessor, the Polaris A-3, which carries three MRVs. The Trident can carry the same payload as the Poseidon over twice the range. [redacted] 25X1

There are 30 Y-I SSBNs in the Soviet fleet. A few additional Y-Is are being converted to attack submarines. Each Y-I has 16 launch tubes equipped with the SS-N-6. The 18 D-I SSBNs have 12 tubes carrying the SS-N-8; the 4 D-IIs carry 16 launchers each for the SS-N-8, and the nine operating D-IIIs are each equipped with 16 SS-N-18s. [redacted] 25X1

All three types of Soviet SLBMs are fueled with storable liquids. The SS-N-6, the first SLBM for a modern SSBN, represented a considerable improvement in range over earlier Soviet SLBMs, but its range was less than that of the US Polaris A-3. One variant of the SS-N-6 carries a MRV warhead. The SS-N-8 has a longer range than the Polaris and the Poseidon. It also is more accurate than its predecessor. Of the Soviet SLBMs deployed, only the SS-N-18 is MIRVed. [redacted] 25X1

Submarines for Intercontinental Attack



25X1

582857 9-80 CIA

Intercontinental Bombers. This component consists of heavy bombers and the related tanker aircraft.

- The aircraft included on the Soviet side are the TU-95 Bear and the M-4 Bison (some of the latter are configured as tankers).[8]
- The principal aircraft included on the US side are the B-52, the FB-111, and the KC-135.
- The US short-range attack missile (SRAM) and the air-launched cruise missile (ALCM) are also included in this mission. 25X1

Total US outlays for intercontinental bombers over the decade were five times as large as the estimated cumulative dollar costs of comparable Soviet activities. This difference reflects the much greater emphasis the United States attaches to long-range manned bombers. Also, some of the early costs are associated with B-52 operations in support of the Vietnam war. 25X1

US outlays for intercontinental bombers fell by almost 40 percent between 1970 and 1976 and then remained constant for the rest of the period, reflecting:

- The reduction of the B-52 fleet from 465 in 1970 to 316 by 1976.
- The addition of 66 FB-111 bombers and the procurement of SRAMs for both FB-111s and B-52s. 25X1

Near the end of the decade a decision was made to extend the service life of the B-52 and use it as a cruise missile carrier. The ALCM program, however, did not have a major effect on US outlays in 1979. 25X1

The Soviet intercontinental bomber force remained relatively constant, with about 160 Bear and Bison aircraft (excluding the tankers) throughout the period. Consequently, costs were relatively stable. 25X1

Because neither side procured substantial numbers of intercontinental bombers in the 1970s, estimated investment costs did not dominate the trends and the totals as they did for ICBMs and SSBNs. Estimated O&M costs were the most significant on the Soviet side; for the United States the distribution of resources was about equal. 25X1

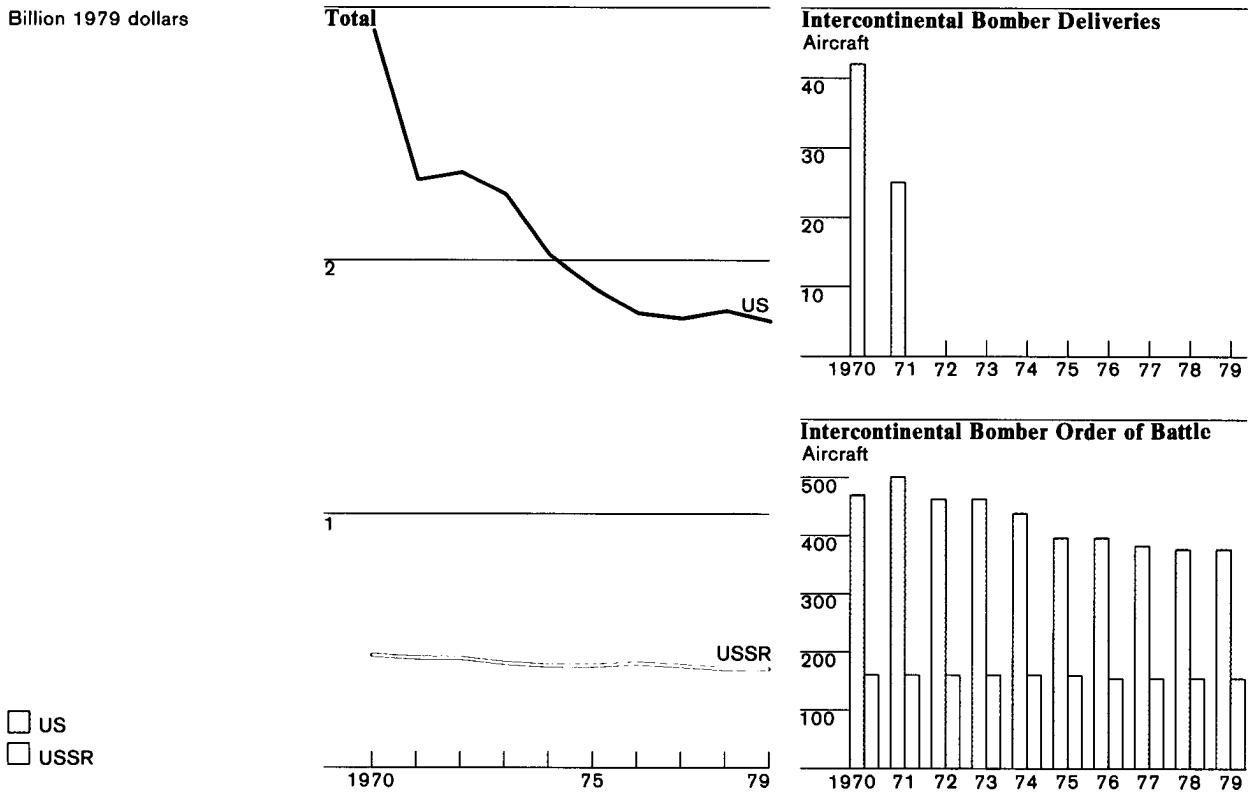
[8] The Soviet Backfire bombers are included in the peripheral attack and naval forces since we believe this is how the Soviets intend to use them. There is, however, some controversy about the range of this aircraft in the Intelligence Community. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US	2.9	2.3	2.4	2.3	2.0	1.9	1.8	1.8	1.8	1.8	20.9
USSR	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	4.1

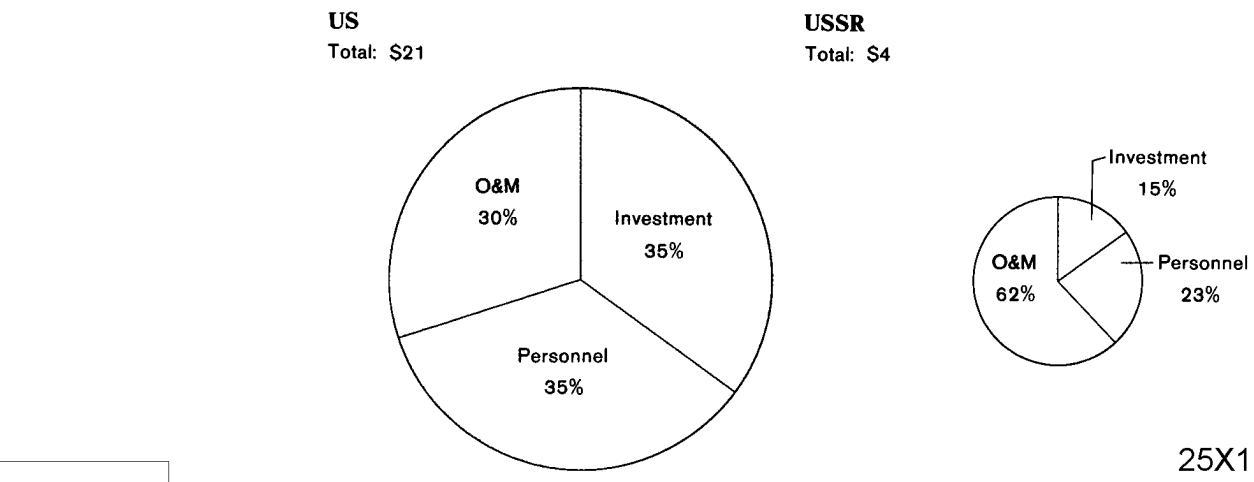
25X1

Intercontinental Bomber Forces

A comparison of US outlays with estimated dollar costs of Soviet activities



Cumulative, 1970–79



25X1

582858 9-80 CIA

Strategic Peripheral Attack Forces

This category consists of forces assigned strategic targets along the periphery of the Soviet Union: medium- and intermediate-range ballistic missiles, medium bombers, and some older ballistic missile submarines formerly assigned intercontinental attack missions.[9] Thus, the primary targets of these forces would be in Western Europe or China. 25X1

The United States has no direct counterpart to these peripheral attack forces in terms of a DPPC mission, although certain US tactical aircraft could perform similar activities. 25X1

The major aircraft assigned to the Soviet peripheral attack mission are the TU-16 Badger, the TU-22 Blinder, and the TU-22M Backfire. Missiles included are the SS-4 and SS-5 MRBMs and the SS-20 IRBM. Ballistic missile submarines assigned to this mission are primarily older diesel-powered types. Included are the Z-class SSB, the G-I, G-II, and G-IV SSBs, and the H-II SSBN. 25X1

There were approximately two dozen of these older submarines in the peripheral attack order of battle in 1979. Approximately three-fourths of the bombers were TU-16s. Similarly, three-fourths of the MR/IRBMs were the older, less capable SS-4s and SS-5s. 25X1

The estimated dollar costs of the Soviet peripheral attack mission rose fairly dramatically over the period. Although there were procurement-caused cycles, the growth rate was approximately 7 percent over the decade. The growth was caused by the beginning of Backfire bomber production in the early seventies and the SS-20 IRBM production beginning in 1976. 25X1

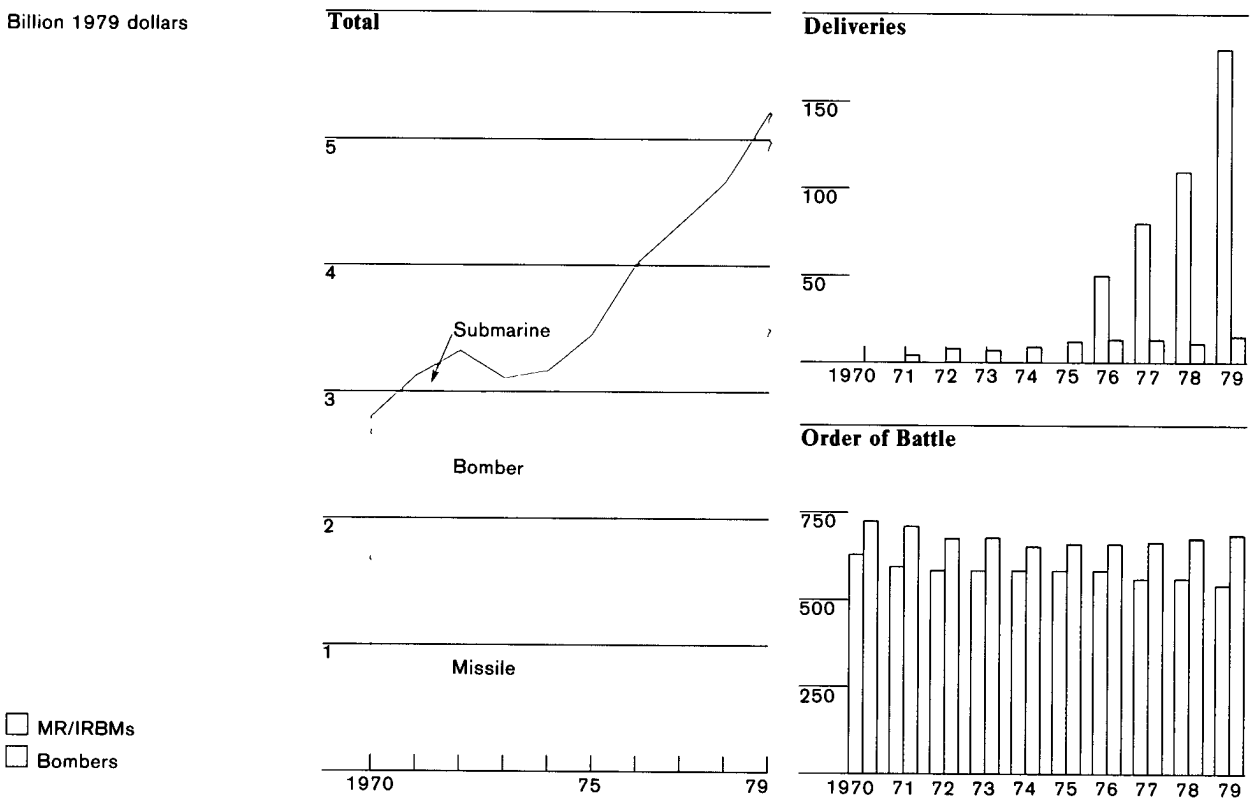
In aggregate resource terms, investment and personnel were equally significant, but investment caused the growth of this mission over the decade. 25X1

[9] Although some SS-11s may have a peripheral attack mission, we have included them all in the intercontinental attack mission. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
Submarines	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.1
Missiles	1.7	1.6	1.6	1.6	1.6	1.7	2.3	2.6	3.1	3.5	21.2
Bombers	1.0	1.3	1.5	1.3	1.4	1.5	1.5	1.4	1.4	1.5	13.8
Total	**2.8**	**3.1**	**3.3**	**3.1**	**3.1**	**3.4**	**4.0**	**4.3**	**4.6**	**5.2**	**37.0**

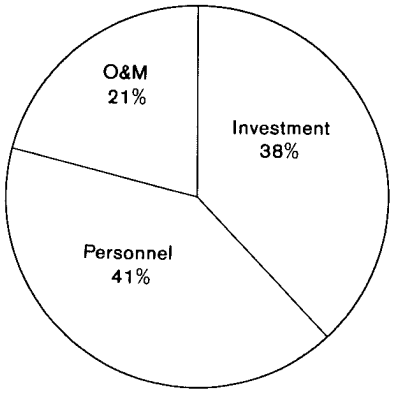
25X1

Soviet Peripheral Attack Forces



Cumulative, 1970-79

Total: $37



25X1

582859 9-80 CIA

Strategic Defense Forces

This mission consists of strategic surface-to-air missile systems, strategic interceptor aircraft, antiballistic missile (ABM) systems, and defensive control and warning systems. 25X1

The estimated cumulative dollar costs of Soviet strategic defense during the decade were eight times as great as total US outlays for this mission. In 1979 the Soviet dollar estimate was about 20 times as great. This disparity in strategic defense activities reflected differences in the two countries' strategic doctrines as well as differences in the bomber threats facing the USSR and the United States.

- US strategic programs favored offensive forces over defensive forces with damage-limiting missions. The United States, having decided not to deploy a nationwide ABM system for defense against the Soviet ICBM and SLBM threats, chose not to commit the levels of resources necessary to modernize its strategic air defenses against the somewhat limited Soviet bomber threat.

- Soviet strategic programs favored more balance between offensive and defensive forces. Although the Soviets also decided not to deploy a nationwide ABM system, they continued to commit substantial resources to bomber defenses. The relatively higher emphasis which the USSR accorded bomber defenses was influenced by the greater threat posed by the US strategic bomber force—a force much larger and more capable than its Soviet counterpart. In addition, Soviet bomber defense activities were influenced by the threat from potentially hostile aircraft in the European and Pacific theaters and in China. 25X1

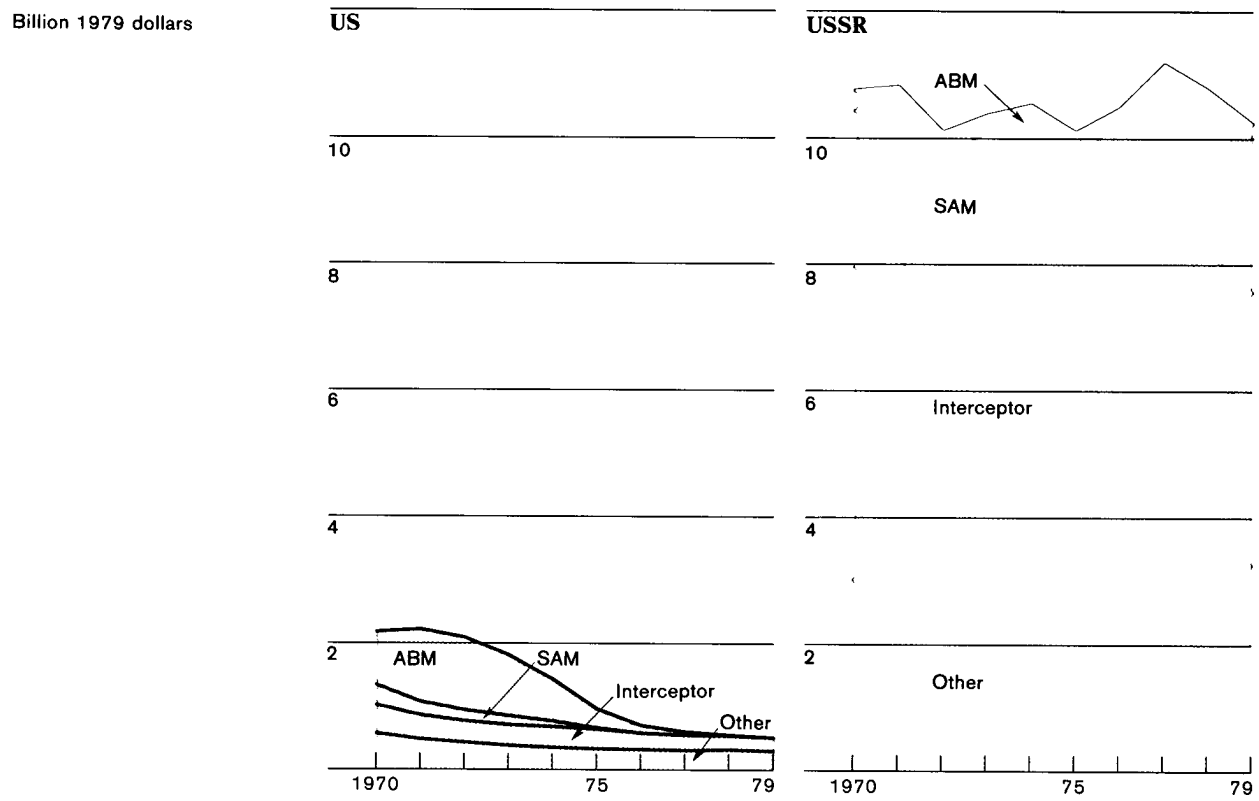
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Interceptors	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	3.0
SAMs	0.3	0.2	0.2	0.1	0.1	0.0	–	–	–	–	1.0
ABMs	0.8	1.1	1.2	1.0	0.7	0.3	0.1	0.0	–	–	5.2
Other [1]	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	3.8
Total	**2.2**	**2.2**	**2.1**	**1.8**	**1.4**	**1.0**	**0.7**	**0.6**	**0.6**	**0.5**	**13.1**
USSR											
Interceptors	4.9	5.1	4.3	4.5	4.6	4.3	4.8	5.6	4.9	4.3	47.3
SAMs	2.5	2.4	2.4	2.4	2.5	2.3	2.2	2.2	2.3	2.4	23.8
ABMs	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	2.8
Other [1]	3.0	3.0	3.1	3.2	3.2	3.1	3.2	3.1	3.3	3.3	31.5
Total	**10.8**	**10.8**	**10.1**	**10.4**	**10.5**	**10.1**	**10.5**	**11.2**	**10.8**	**10.2**	**105.3**

[1] "Other" consists primarily of control and warning but also includes costs that were impossible to place in the specific components.

25X1

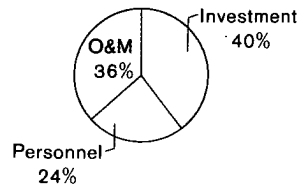
Strategic Defense Forces

A comparison of US outlays with estimated dollar costs of Soviet activities

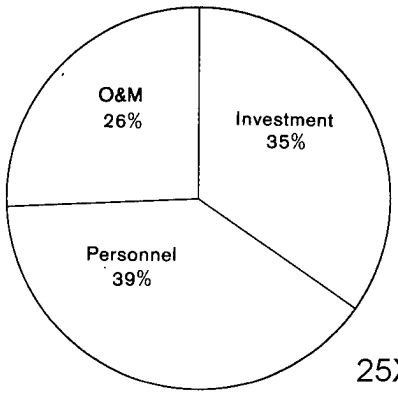


Cumulative, 1970–79

US
Total: $13



USSR
Total: $105



25X1

582860 9-80 CIA

During the 1970-79 decade the Soviet Union:

- Reduced the number of interceptors assigned to strategic defense from about 3,400 to 2,600, while modernizing its strategic air defenses with the addition of over 1,300 SU-15 Flagon, MIG-25 Foxbat, and MIG-23 Flogger interceptors to the order of battle.
- Continued the deployment of SA-3 and SA-5 SAMs, resulting in a 1979 level of 1,200 launch sites and some 9,400 SAMs.
- Maintained the Moscow ABM defenses and brought two large battle management radar complexes at Moscow to operational capability.
- Completed deployment of the Hen House ballistic missile early warning system and initiated construction of four new large phased-array radars. 25X1

In contrast, the United States during this period:

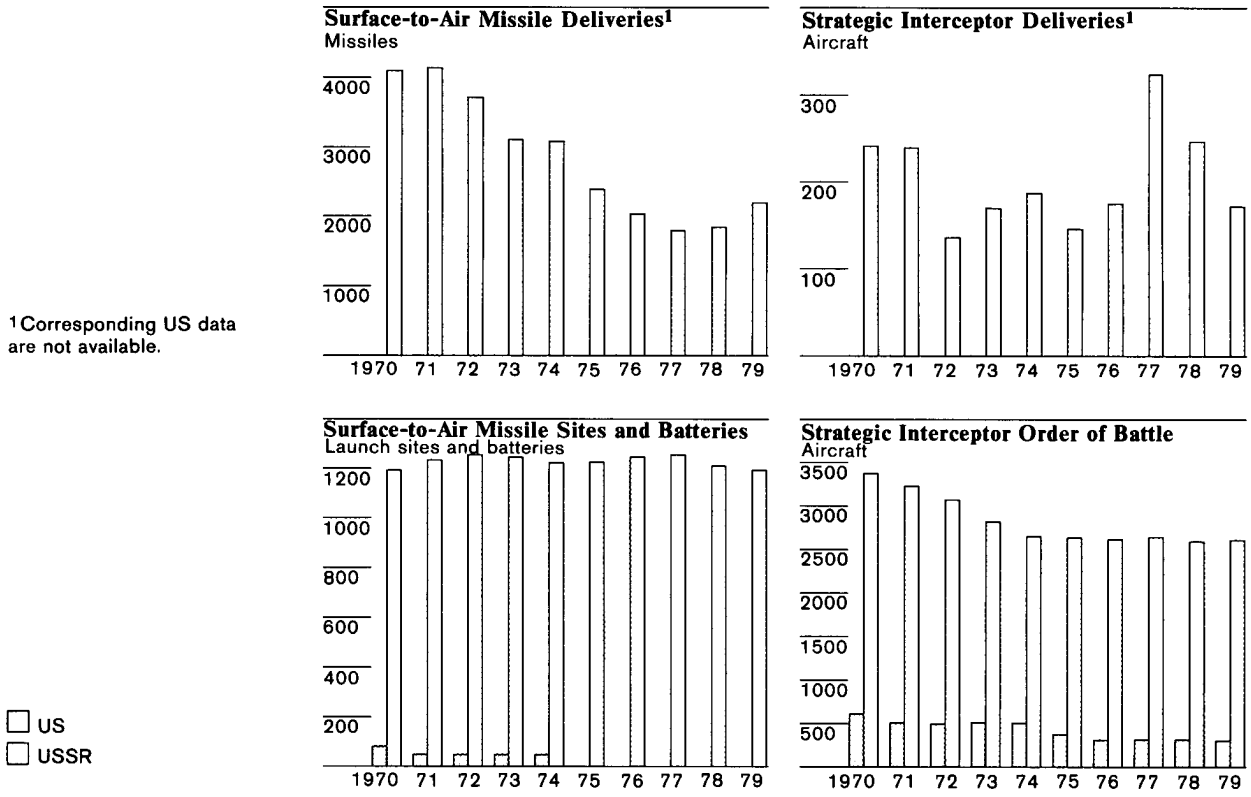
- Reduced its strategic interceptor order of battle from approximately 600 to 300 aircraft. Most of the remaining aircraft were the older F-106s.
- Completed in 1975 the elimination of all strategic defense SAM batteries. The only SAM deployed by the US Army during the period was the Nike Hercules.[10]
- Deployed in 1975, and then deactivated in 1976, one ABM facility with 100 launchers. Costs for the program peaked in the early 1970s. 25X1

US outlays for strategic defense declined continuously during the period and in 1979 were only one-fourth as large as they had been in 1970. 25X1

The estimated dollar costs of personnel were the largest resource category for this mission for the USSR. However, fluctuations in investment, caused primarily by the procurement cycle for strategic interceptor aircraft, accounted for the fluctuations in the total. 25X1

[10] The USAF Bomarc, eliminated in 1973, is not included in the accompanying order-of-battle data. 25X1

Strategic Defense Forces



[1] Corresponding US data are not available.

25X1

582861 9-80 CIA

General Purpose Forces

General purpose forces are defined to include the following DPPC categories:

- Land forces.
- Tactical air forces.
- General purpose naval forces (including ASW, amphibious, and naval support forces).
- Mobility forces (includes airlift and sealift forces—see discussion on page 54).

25X1

For the 1970-79 decade the estimated cumulative dollar costs of Soviet general purpose forces were 50 percent more than corresponding US outlays. The Soviet annual total equaled US outlays at the beginning of the period but by the end of the decade was 60 percent higher.

25X1

The trends in US and Soviet general purpose force levels were quite different during the period:

- Soviet general purpose forces increased as a result of the modernization of land and tactical air forces, the buildup along the Sino-Soviet border and in Warsaw Pact areas, the increase in Soviet naval force levels and operations, and continued deployment of advanced tactical aircraft.
- US general purpose forces decreased until 1976. Since then they have grown at an increasing rate as the United States has modernized its land, naval, and tactical air forces.

25X1

The estimated annual dollar cost of Soviet general purpose forces increased by more than 25 percent over the 1970-79 decade, while corresponding US outlays fell by almost 20 percent despite the recent growth.

25X1

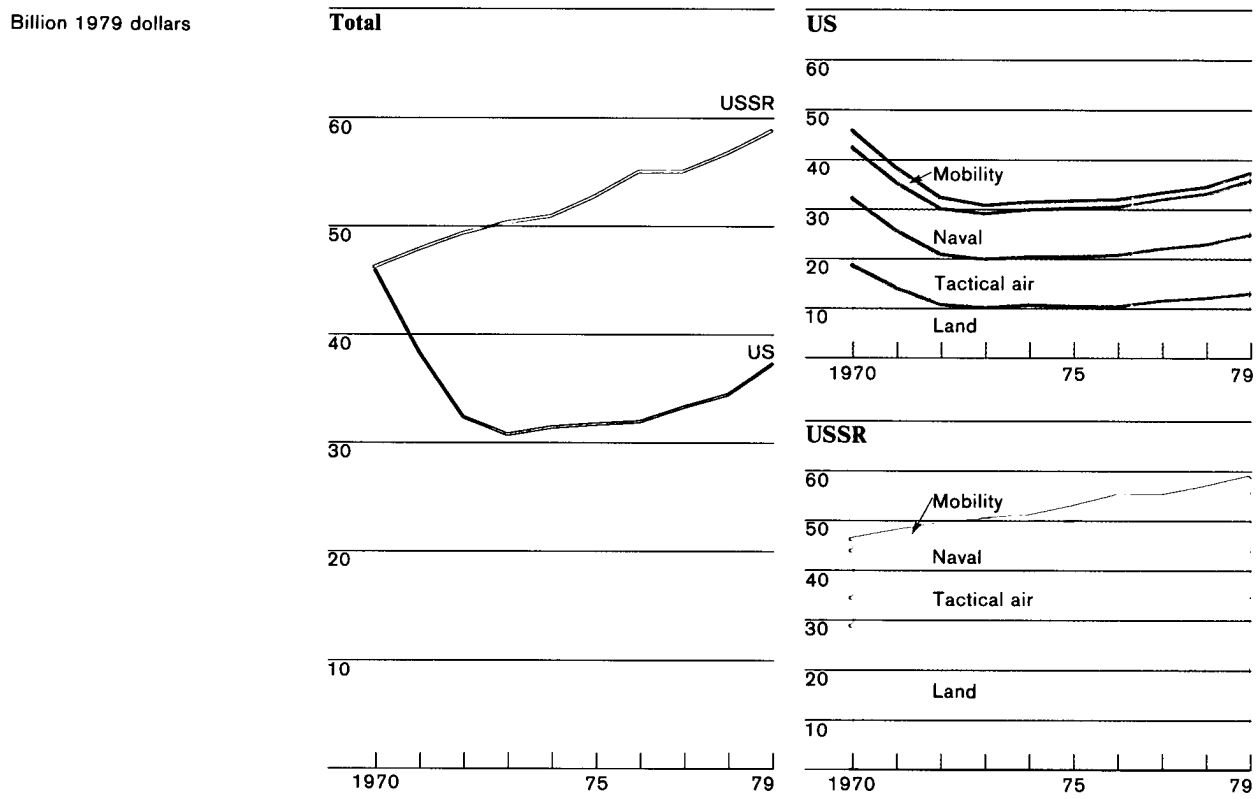
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Land	18.7	14.1	10.8	10.2	10.7	10.5	10.4	11.6	12.2	13.1	122.3
Tactical air	13.5	11.5	10.2	9.8	9.7	10.0	10.4	10.5	10.8	11.8	108.0
Naval	10.3	9.6	9.2	9.1	9.5	9.8	9.7	9.9	10.2	10.9	98.1
Mobility [1]	3.5	3.0	2.2	1.7	1.5	1.4	1.4	1.3	1.3	1.5	18.8
Total	**45.9**	**38.3**	**32.3**	**30.7**	**31.4**	**31.7**	**31.9**	**33.3**	**34.4**	**37.3**	**347.2**
USSR											
Land	28.9	29.6	30.6	31.3	32.0	32.4	33.1	33.1	33.9	34.6	319.5
Tactical air	5.6	6.4	7.7	8.5	7.8	8.2	9.5	8.6	9.2	9.2	80.8
Naval	9.5	9.6	8.9	8.5	9.0	9.4	9.6	10.5	11.1	11.9	97.9
Mobility	2.3	2.3	2.2	2.0	2.1	2.7	2.8	2.8	2.6	3.1	25.0
Total	**46.2**	**47.9**	**49.3**	**50.3**	**50.9**	**52.8**	**55.0**	**55.1**	**56.8**	**58.9**	**523.2**

[1] See discussion on page 54.

25X1

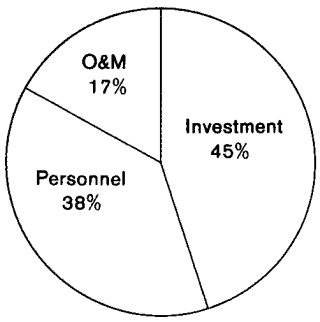
General Purpose Forces

A comparison of US outlays with estimated dollar costs of Soviet activities

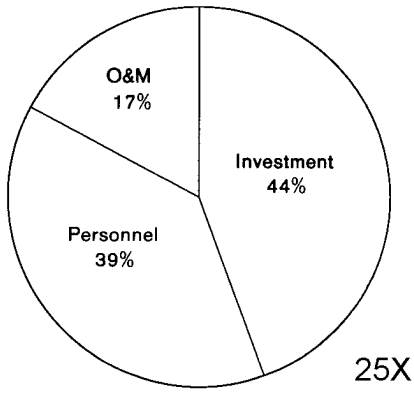


Cumulative, 1970–79

US
Total: $347



USSR
Total: $523



25X1

582862 9-80 CIA

Land Forces

This mission includes those US Army and Marine elements in the DPPC categories of Land Division Forces and Land Theater Forces. On the Soviet side, it includes all of the Ground Forces and some other forces—such as ground attack helicopters and portions of the Border Guards—that have roles similar to those of the US forces in the two DPPC categories. 25X1

Over the 1970-79 decade the estimated cumulative dollar costs of Soviet land forces were over two and a half times as large as corresponding US outlays. That also was the margin in 1979. In 1970 the estimated dollar costs of Soviet land forces had been one and a half times as large as the US counterpart. 25X1

The trends in this mission in the two countries have been dissimilar. Estimated Soviet dollar costs have steadily grown. US outlays, on the other hand, fell by almost 50 percent from 1970 to 1976, but they grew over the rest of the decade. 25X1

The manpower and weapons inventory of Soviet land forces expanded during the decade, reflecting a continued increase in the size of divisions and the addition of 12 divisions, which raised the total to 175 in 1979. 25X1

Accompanying this increase in Soviet manpower (200,000 men) was a modernization of the Soviet land forces inventory, accomplished in part by producing 25,000 tanks and over 40,000 other armored vehicles (primarily armored personnel carriers). Despite the decrease in outlays, the US land forces were also able to modernize by producing 6,000 tanks and 6,500 other armored vehicles. 25X1

Comparisons of the large Soviet conscript army with the US volunteer force are made in detail later in this paper, but we can note here that the USSR has made a more intense effort to develop its Ground Forces than has the United States. It has almost three times as many men in land forces as the United States and considerably more tanks, APCs, and artillery. 25X1

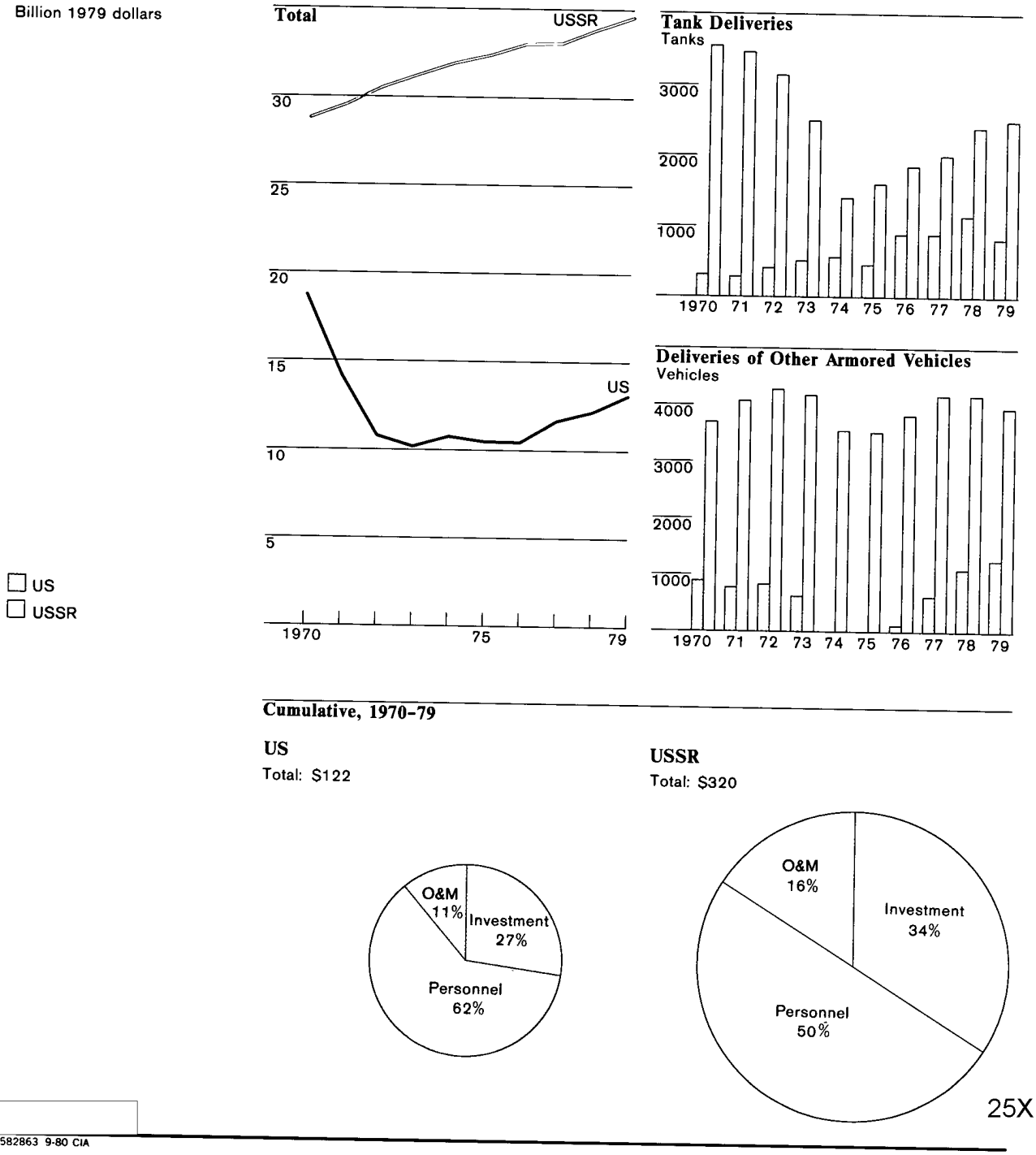
Estimated personnel costs constituted half of the total costs for the USSR and more than half for the United States. The estimated dollar costs for all three resource categories grew at roughly the same rate in the USSR; investment led both the United States decline and the later increase. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US	18.7	14.1	10.8	10.2	10.7	10.5	10.4	11.6	12.2	13.1	122.3
USSR	28.9	29.6	30.6	31.3	32.0	32.4	33.1	33.1	33.9	34.6	319.5

25X1

Land Forces

A comparison of US outlays with estimated dollar costs of Soviet activities



25X1

582863 9-80 CIA

Tactical Air Forces

This mission consists of all land- and sea-based fixed-wing aircraft that are used in a combat support role and, on the US side, multipurpose aircraft carriers. (These carriers are included to accord with DPPC definitions.) Helicopters used for ground attack are not included, nor are those aircraft and aircraft carriers which have primarily an antisubmarine mission. 25X1

For the decade, US cumulative outlays for these forces were one-third more than the cumulative dollar costs of comparable Soviet activities. This difference reflects the larger size of the US tactical air forces, the higher operations level, and the inclusion of the US aircraft carriers.[11] 25X1

US outlays for tactical air forces were two and a half times as great as estimated Soviet costs at the beginning of the decade but only 30 percent larger in 1979. This change reflects the decline of the US tactical air force activity after the Vietnam war and the Soviet procurement of more complex, and therefore more costly, tactical aircraft. 25X1

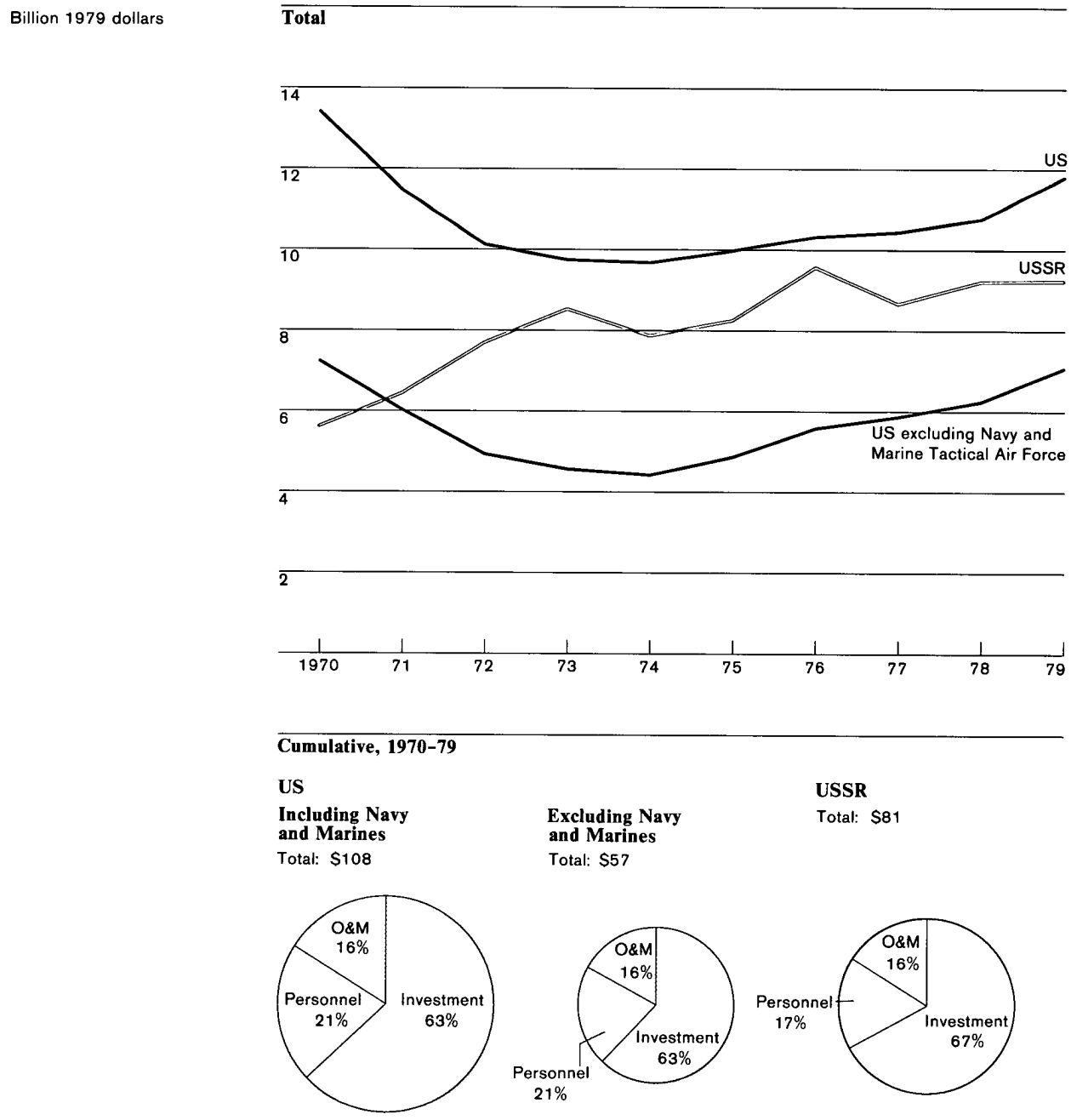
[11] If US multipurpose aircraft carriers and the associated aircraft are excluded, the estimated dollar costs of Soviet tactical air forces were 40 percent more than the corresponding US total (that is, USAF outlays for tactical air forces) for the decade. In 1970 these US outlays were almost one-third more than the estimated Soviet dollar costs; in 1979 the estimate for Soviet forces was almost one-third more than these US outlays. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Air Force	7.3	6.1	5.0	4.6	4.4	4.9	5.6	5.9	6.3	7.1	57.1
Navy and Marines	6.2	5.4	5.2	5.2	5.3	5.1	4.7	4.6	4.5	4.7	51.0
Total	**13.5**	**11.5**	**10.2**	**9.8**	**9.7**	**10.0**	**10.4**	**10.5**	**10.8**	**11.8**	**108.0**
USSR Total	**5.6**	**6.4**	**7.7**	**8.5**	**7.8**	**8.2**	**9.5**	**8.6**	**9.2**	**9.2**	**80.8**

25X1

Tactical Air Forces

A comparison of US outlays with estimated dollar costs of Soviet activities



25X1

582864 9-80 CIA

Annual US outlays for tactical air forces fell from 1970 to 1974 but then grew until the end of the period.

- Air Force outlays for tactical air forces fell until 1974 but grew quite rapidly from then until the end of the period as A-10s and F-15s were added to the force.
- Navy and Marine outlays for tactical air forces fell from 1970 to 1972, leveled off for four years, and then fell to another lower plateau for the rest of the decade. [redacted] 25X1

Estimated Soviet dollar costs for tactical air forces increased early in the decade but fluctuated considerably over the last six years. Over the decade the total increased by two-thirds. [redacted] 25X1

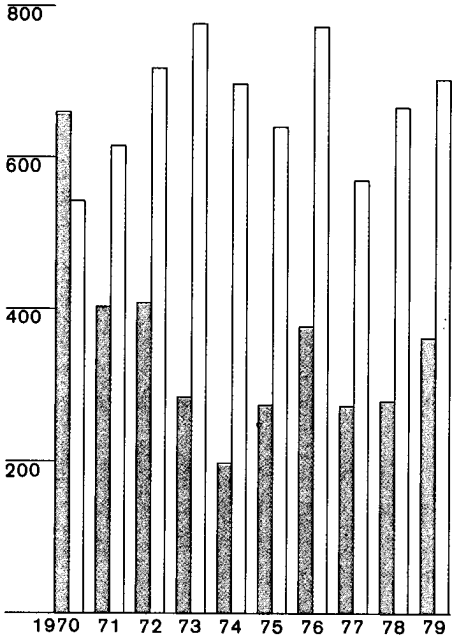
Investment costs were approximately two-thirds of estimated total costs of the tactical air mission for both countries over the 1970-79 decade. [redacted] 25X1

The principal aircraft in the US order of battle over the decade was the F-4 Phantom. The Air Force, Navy, and Marines all operate this aircraft. By 1979, however, there were approximately 700 of the new F-14s, F-15s, and A-10s in this mission in addition to the 1,650 F-4s. [redacted] 25X1

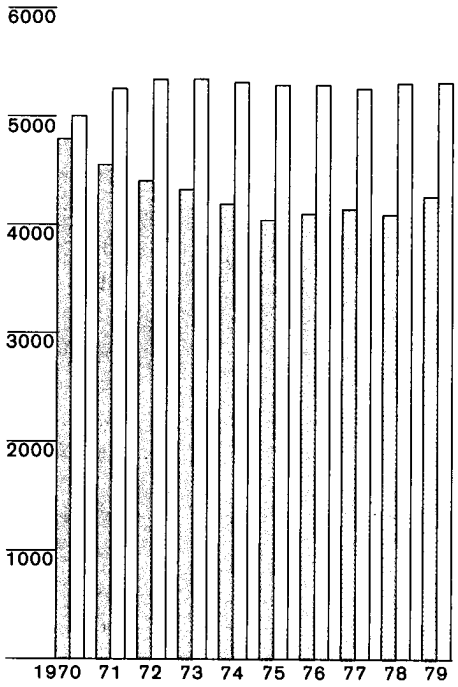
Two aircraft dominated this Soviet mission in 1979: the MIG-21 Fishbed (1,600) and the newer MIG-23/27 Flogger (1,400). [redacted] 25X1

Tactical Air Forces

Tactical Combat Aircraft Deliveries[1]



Tactical Combat Aircraft Order of Battle



[1] Deliveries of some US tactical aircraft were actually to the support mission for training rather than to the tactical air mission.

US
USSR

25X1

582865 9-80 CIA

General Purpose Naval Forces

Included in the general purpose naval forces are:

- All major (over 1,500 tons) and minor surface combatants.
- Attack submarines.
- ASW aircraft and ASW carriers.
- Amphibious warfare ships.
- Naval forces directly supporting the fleets (auxiliaries).

25X1

Not included in this category are multipurpose aircraft carriers, which are assigned to tactical air forces, and strategic missile submarines and their associated tenders, which are assigned to strategic forces. The US Coast Guard is included with the support mission rather than with the general purpose naval forces.

25X1

The estimated dollar costs of Soviet general purpose naval activity were equal to US outlays for the decade and were slightly more in 1979.[12]

25X1

Estimated dollar costs for Soviet naval forces grew only slightly over the decade. They had actually fallen by 10 percent by 1973 but grew at about 5 percent per year after that. United States costs also fell until 1973 but grew erratically from then until the end of the period.

25X1

For both the United States and the USSR, about half of the estimated total costs for this mission consisted of investment. Fluctuations in investment caused fluctuations in the Soviet total, while increases in O&M costs caused this US mission to grow after 1973.

25X1

The largest share, about 40 percent, of Soviet general purpose naval investment over the decade was for submarines. This reflects the USSR's effort to modernize its submarine force, by far the world's largest and the principal offensive arm of the Soviet Navy. Major surface combatants accounted for 30 percent, although the USSR built many more minor than major combatants. Minor combatants, which accounted for about 10 percent of investment, include mine warfare ships, light frigates, patrol combatants, and small missile and torpedo attack boats.

25X1

[12] If the Navy and Marine tactical air force missions (which include carriers) and the Soviet Navy's tactical air forces are included with general purpose naval forces, US outlays were 50 percent greater over the decade. In 1979 they were 30 percent larger than estimated Soviet dollar costs.

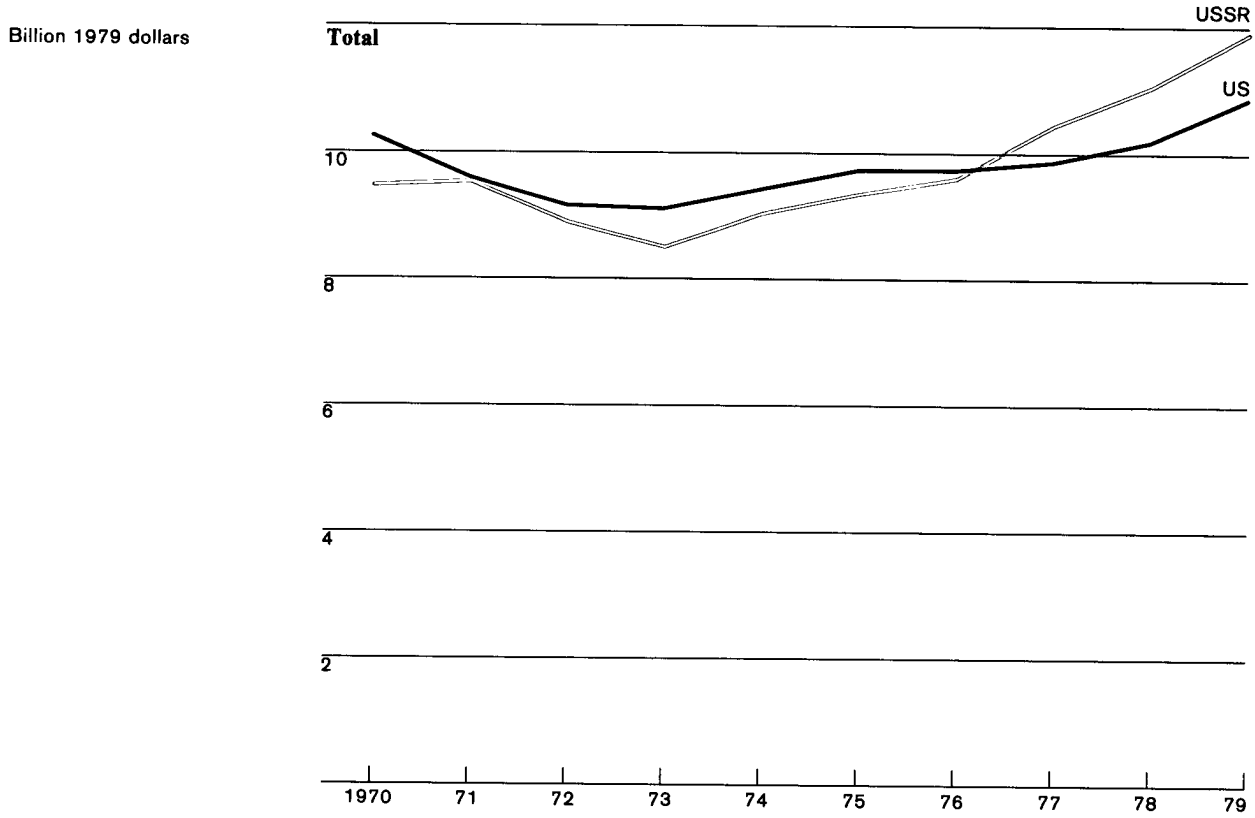
25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US	10.3	9.6	9.2	9.1	9.5	9.8	9.7	9.9	10.2	10.9	98.1
USSR	9.5	9.6	8.9	8.5	9.0	9.4	9.6	10.5	11.1	11.9	97.9

25X1

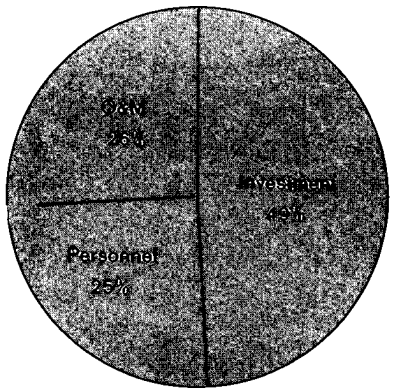
General Purpose Naval Forces

A comparison of US outlays with estimated dollar costs of Soviet activities

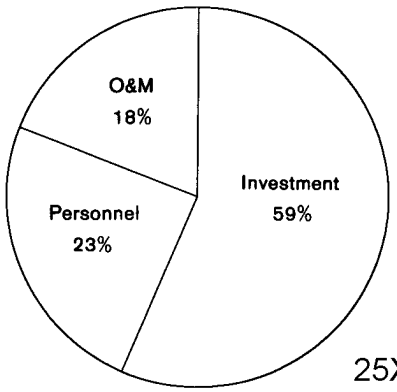


Cumulative, 1970–79

US
Total: $98



USSR
Total: $98



25X1

582866 9-80 CIA

Soviet general purpose naval aircraft (primarily ASW)[13] accounted for another 10 percent of naval investment. The USSR also built large numbers of small amphibious warfare ships during the 1970-79 decade, but they accounted for less than 5 percent of naval investment. 25X1

In comparison, general purpose submarines and major surface combatants each accounted for less than 30 percent of US investment in general purpose naval forces for the period. During the 1970s the United States built only four minor surface combatants. It produced 35 large amphibious warfare ships during the decade, but these accounted for less than 10 percent of investment. ASW aircraft absorbed 20 percent of naval investment. 25X1

Over the decade Soviet general purpose naval forces underwent considerable modernization by procuring:

- Twenty-six nuclear-powered torpedo attack submarines, including four of the fast, deep-diving A-class, 11 nuclear-powered cruise missile submarines, and 20 diesel-powered submarines.
- Two Kiev-class V/STOL aircraft carriers.
- Fifteen cruisers, 14 destroyers, and 27 large frigates, all equipped with guided missiles.
- Approximately 400 sea- and land-based fixed- and rotary-wing ASW aircraft. Over half of these were the KA-25 Hormone helicopter. 25X1

Although the size of the US fleet dropped throughout the seventies as many older ships were retired, the US modernized its forces by procuring:

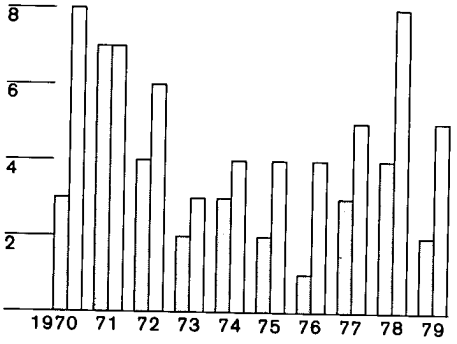
- Thirty nuclear attack submarines, including 10 of the new Los Angeles–class.
- Five nuclear-powered missile cruisers, 25 destroyers, 45 frigates, and two missile frigates. The destroyers and frigates have primarily an open-ocean escort/ASW function, while the cruisers' main mission is antiair warfare.
- Approximately 300 fixed- and rotary-wing ASW aircraft consisting principally of the P-3C Orion (land based) and the S-3 Viking (sea based). 25X1

[13] The Soviet Navy's tactical aircraft are included in the tactical air force mission. 25X1

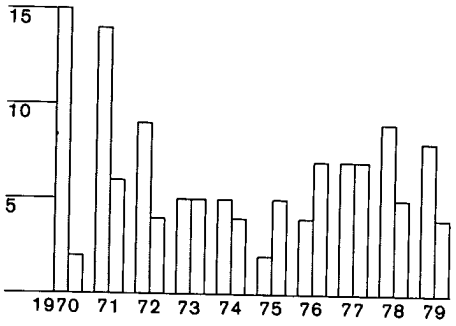
General Purpose Naval Forces

Deliveries

Attack Submarines

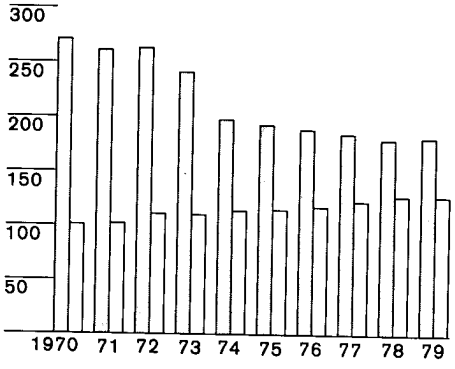


Major Surface Combatants

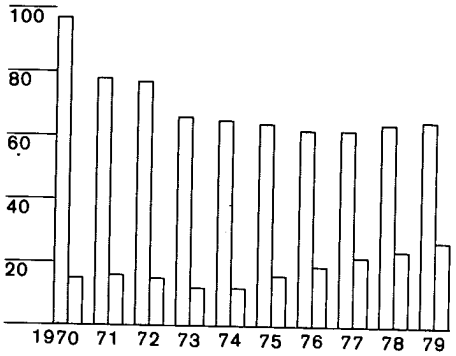


Order of Battle

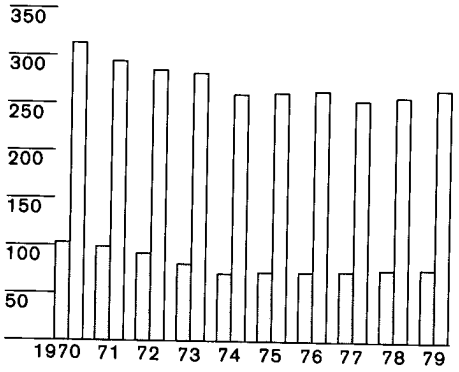
Major Surface Combatants



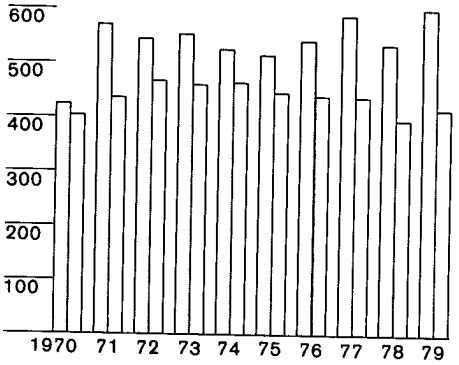
Amphibious Assault Ships



Attack Submarines



ASW Aircraft



☐ US
☐ USSR

25X1

582867 9-80 CIA

Mobility Forces

The mobility mission presents special definitional problems. According to DPPC definitions it includes airlift, sealift, and the operation of port terminals. We have not been able to identify a separate Soviet sealift mission, however, so all Soviet sealift is included in the general purpose naval forces. We believe the dollar cost of this Soviet activity is relatively small. 25X1

Another problem relates to US accounting procedures. A number of US mobility services are sold to other US defense organizations, but the mobility mission as defined by DPPC does not reflect the costs associated with these self-financing mobility services. When these "hidden" mobility costs are included, US outlays for the mobility mission are substantially more. In this section, to illustrate the true scope of the US mobility mission, we have arrayed the data so as to show the real total cost of all mobility programs.[14] 25X1

For the decade, US costs of the mobility mission were 85 percent more than estimated Soviet costs. In 1979, US costs were 20 percent higher. 25X1

Thus, in contrast with many other comparisons in this paper, the costs of the US mobility mission generally exceed corresponding Soviet dollar costs. This occurs because the United States, with its many overseas bases and a need to supply them by sea and by air, has a much greater requirement for a mobility mission than the USSR. The USSR has a considerably smaller mobility mission. We do not count any rail transport in the USSR, however, and that may cause an understatement of USSR mobility activities. 25X1

The trends in the mobility missions of the two countries have been in opposite directions: while estimated dollar costs of Soviet mobility forces (that is, airlift) grew by 35 percent over the decade, US costs fell by 50 percent. Much of the US decline was caused by the withdrawal from Vietnam. 25X1

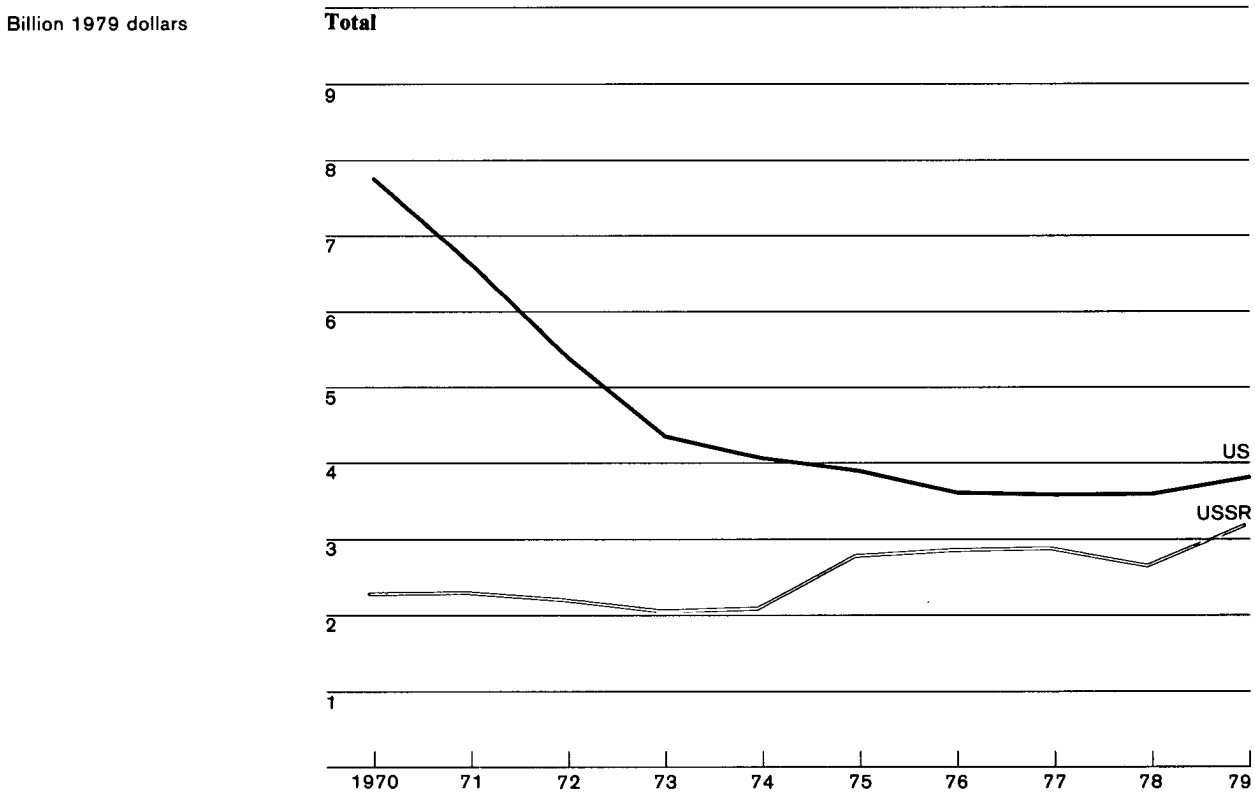
[14] For this reason, the US mobility total differs from that shown on page 42. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Airlift	5.3	4.6	3.6	2.9	2.7	2.6	2.5	2.5	2.4	2.6	31.7
Sealift	2.4	1.9	1.7	1.5	1.3	1.2	1.1	1.1	1.1	1.2	14.6
Total	**7.7**	**6.6**	**5.3**	**4.3**	**4.0**	**3.9**	**3.6**	**3.5**	**3.6**	**3.8**	**46.3**
USSR Total	**2.3**	**2.3**	**2.2**	**2.0**	**2.1**	**2.7**	**2.8**	**2.8**	**2.6**	**3.1**	**25.0**

25X1

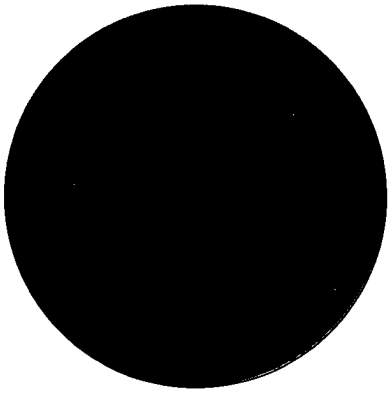
Mobility Forces

A comparison of US outlays with estimated dollar costs of Soviet activities

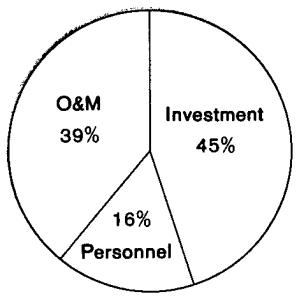


Cumulative, 1970–79

US
Total: $46



USSR
Total: $25



25X1

582868 9-80 CIA

Support Forces

The support mission includes the base operating, logistic, training, administrative, and other support activities required by the combat forces.[15] It also serves as a catchall category for any activity not covered elsewhere. 25X1

Thus, the support mission includes such diverse activities as housing, medical care, supply operations, recruitment/conscription activities, military space programs, and the portion of the US Coast Guard devoted to defense. It also includes the centrally located command personnel associated with each mission (for example, at field army, air army, or numbered air force headquarters), and those at the US Department of Defense and Soviet Ministry of Defense levels. 25X1

Over the decade cumulative US outlays for support forces exceeded the estimated dollar costs of Soviet support forces by almost one-fourth. In 1979, however, estimated Soviet dollar costs were almost equal to US outlays. 25X1

US support forces fell every year from 1970 to 1977, decreasing by 25 percent until they began to grow again in 1978 and 1979. The decline paralleled the decreases in most of the combat forces from the beginning of the decade until the middle seventies. 25X1

The estimated dollar costs for Soviet support forces increased almost every year of the decade except for a brief leveling off in 1977 and 1978. The total increase, almost 25 percent, kept pace with the growth of the other missions and reflected the increase in manpower and the growth of the inventory of sophisticated military equipment. 25X1

Over the decade O&M costs were the largest resource category for the United States in this mission; estimated personnel costs were the largest for the USSR. The proportion of investment in estimated total costs was relatively small in both countries. 25X1

Present knowledge does not permit us to make a more detailed dollar cost comparison of the activities within the support mission. For instance, we cannot at this point accurately compare the estimated dollar costs of the training or logistics establishments of each country. 25X1

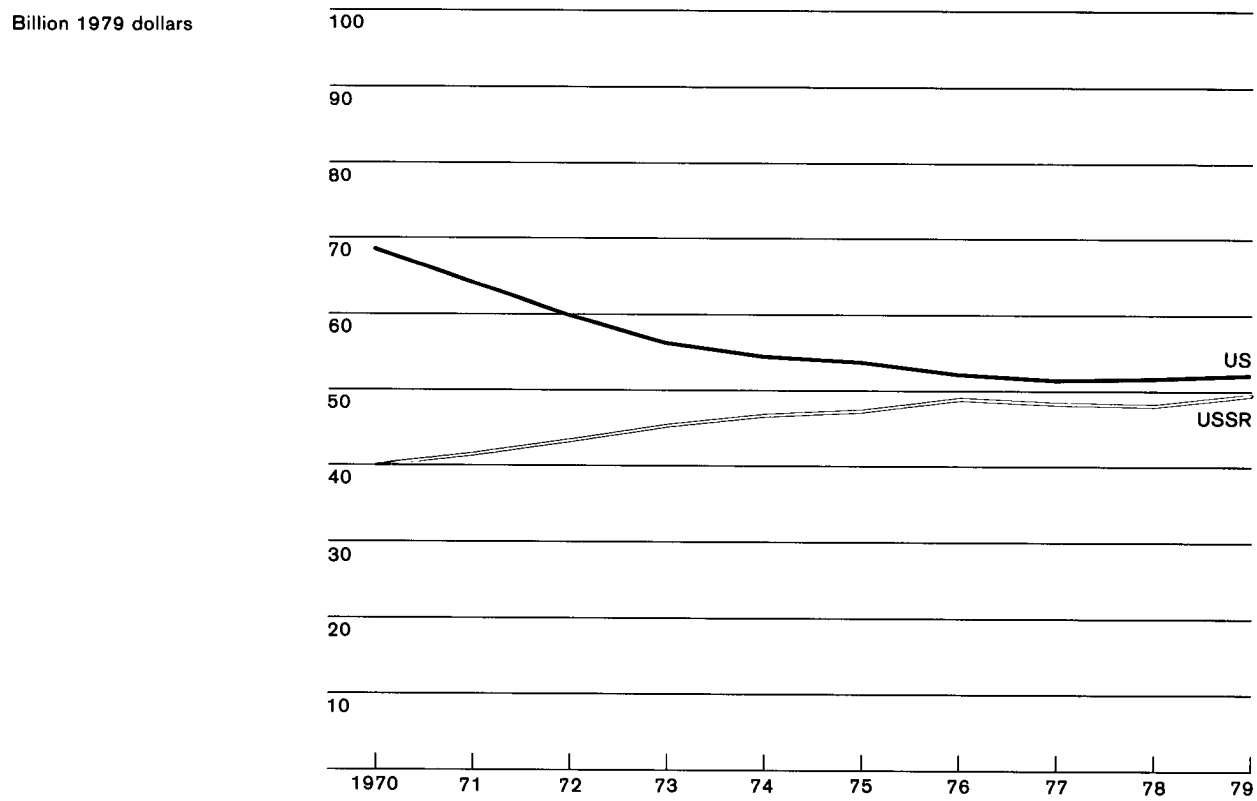
[15] The exact DPPC categories included are Support Activities, Auxiliary Activities (except RDT&E), Individuals, and Miscellaneous. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US	68.9	64.6	60.2	56.5	54.8	54.0	52.4	51.6	51.8	52.3	567.1
USSR	40.1	41.6	43.4	45.4	46.8	47.4	49.0	48.4	48.2	49.7	460.0

25X1

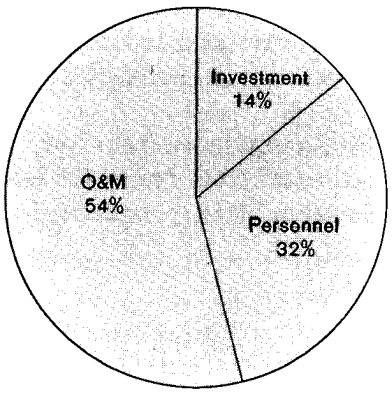
Support Forces

A comparison of US outlays with estimated dollar costs of Soviet activities

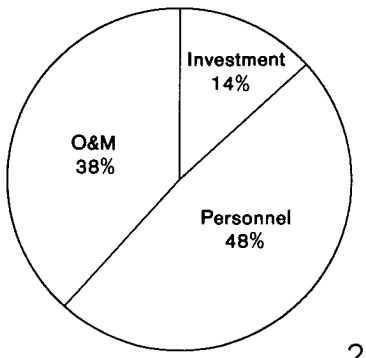


Cumulative, 1970–79

US
Total: $567



USSR
Total: $460



25X1

582869 9-80 CIA

Estimated Dollar Cost by US Service

This section compares the US Army, Air Force, Navy (including Marines), and defense agencies with their hypothetical Soviet counterparts. We have aggregated all the Soviet units as if the USSR structured its military as the United States does. The purpose of this exercise is to give some idea of the comparative size in dollars of Soviet counterpart organizations. 25X1

It must be emphasized that this is not the way the Soviets structure their services. Instead of three services, the USSR has five: the Strategic Rocket Forces (SRF), the National Air Defense Forces (PVO), the Ground Forces, the Navy, and the Air Forces. The Air Forces include Long Range Aviation (LRA), Military Transport Aviation (VTA), and Frontal (tactical) Aviation. In general, there is no one-to-one correspondence of activities: for example, the activities of the US Air Force are performed in the USSR by the SRF, the PVO, and the Air Forces. Yet, some of the PVO's activities are carried out by the US Army. 25X1

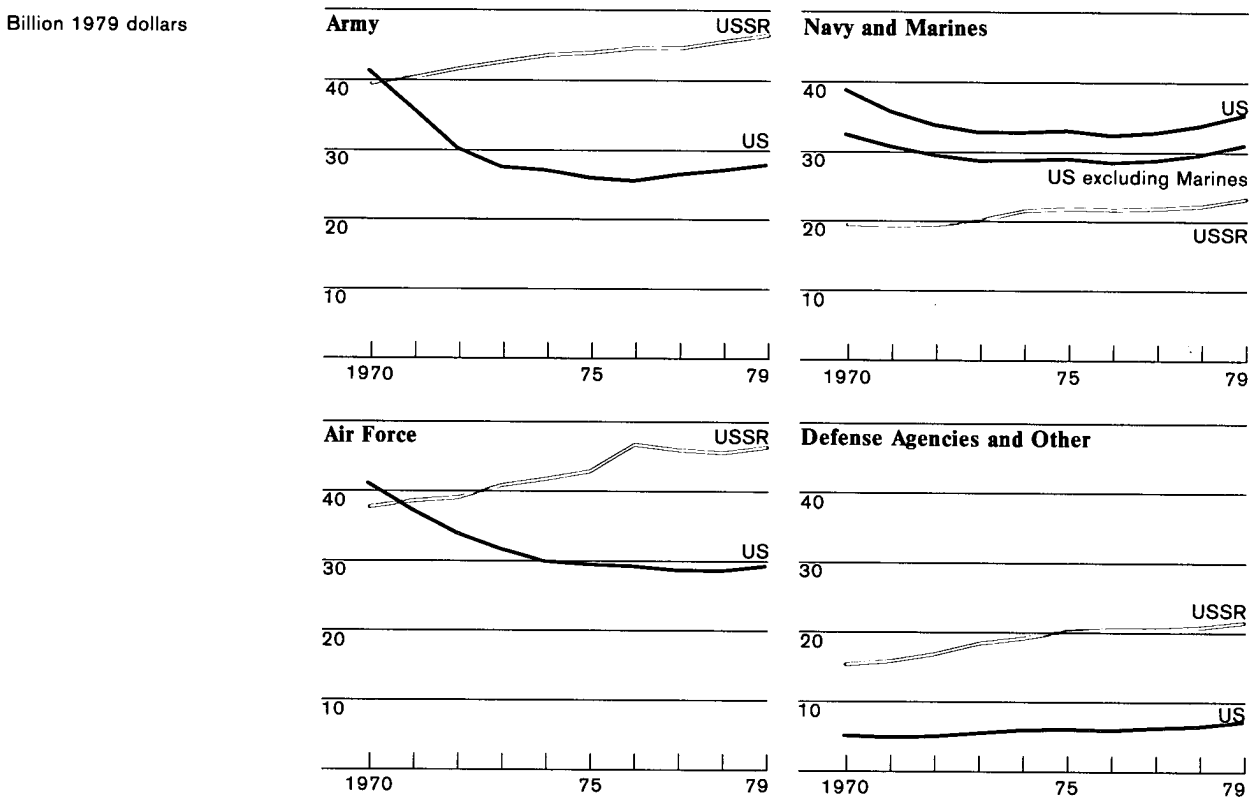
The category "defense agencies and other" includes all activities at the Department of Defense or Ministry of Defense level, nuclear weapons procurement and maintenance costs (most of these are performed in the United States by DoE), the US Coast Guard, and the Soviet KGB. Some other miscellaneous activities that we could not assign to a specific service are also included in this category. An example of this is the Soviet *voyenkomati*, which are responsible for the conscription of recruits. The *voyenkomati* are included in "defense agencies and other"; in the United States, each service is responsible for its own recruiting, and the costs are assigned accordingly. Another example is that much of the central command structure is at the service level in the United States but at the Ministry of Defense level in the USSR. 25X1

This problem makes the Soviet entry for "defense agencies and other" too high relative to the corresponding US category. Conversely, each of the Soviet "services" is underestimated by a smaller, but unknown, amount. 25X1

All RDT&E costs are excluded from both sides, since we are unable to allocate these estimated costs among the Soviet services. Pensions are also excluded. All Soviet military space activities are assigned to the Soviet "Air Force." 25X1

Estimated Dollar Costs by US Service

A comparison of US outlays with estimated dollar costs of Soviet activities



25X1

582870 9-80 CIA

The largest difference (ignoring "defense agencies and other" for reasons noted above) is for the "Army." Soviet "Army" estimated costs were half again as much as US Army outlays over the 1970-79 decade. The cumulative dollar costs for the Soviet "Air Force" were one-third more than US Air Force outlays over the decade. Finally, the size of the US Navy (and Marines) exceeded the hypothetical Soviet counterpart. Estimated Soviet cumulative dollar costs were only two-thirds of US Navy and Marine outlays. 25X1

The fastest growing Soviet "service" (again ignoring "defense agencies and other") is the "Air Force," although there is little difference among the services. The US Army decreased the most over the decade; the Navy, the least. 25X1

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Cumulative
Billion 1979 dollars											
US											
Army	41.2	35.7	30.1	27.3	26.9	25.7	25.3	26.2	26.8	27.6	293.0
Navy and Marines	38.6	35.5	33.6	32.6	32.6	32.8	32.1	32.5	33.4	35.0	338.7
Navy only	32.2	30.5	29.3	28.5	28.5	28.7	28.2	28.5	29.3	30.7	294.4
Marines only	6.4	5.0	4.3	4.1	4.0	4.1	3.9	4.0	4.2	4.3	44.3
Air Force	41.0	37.1	33.8	31.5	29.7	29.3	29.0	28.5	28.4	29.1	317.3
Defense agencies and other	4.8	4.6	4.7	5.2	5.6	5.8	5.6	5.9	6.2	6.8	55.2
Total	**125.6**	**113.0**	**102.3**	**96.6**	**94.8**	**93.6**	**92.0**	**93.1**	**94.8**	**98.5**	**1,004.1**
USSR											
"Army"	39.3	40.2	41.5	42.5	43.4	43.8	44.5	44.5	45.5	46.4	431.7
"Navy"	19.4	19.3	19.4	20.0	21.4	21.7	21.6	21.7	22.1	23.2	209.8
"Air Force"	37.5	38.4	38.8	40.7	41.6	42.7	46.5	45.8	45.4	46.2	423.5
"Defense agencies and other"	15.2	15.7	16.7	18.3	19.0	20.1	20.3	20.3	20.6	21.3	187.6
Total	**111.4**	**113.6**	**116.5**	**121.4**	**125.5**	**128.3**	**132.8**	**132.3**	**133.7**	**137.2**	**1,252.6**

25X1

Military Manpower

The manpower comparisons in this section are designed to cover the same defense planning and programing categories as the preceding dollar cost comparisons:

- On the Soviet side, this comparison includes men in the Ground Forces, Air Forces, Air Defense Forces, Navy, Strategic Rocket Forces, the Border Guards of the KGB, and the national command and support structure.
- On the US side, the manpower total includes all members of the armed forces and the Coast Guard.[16] 25X1

We include only those Soviet personnel who fill what in the United States are considered to be national security roles. Thus, we do not include Soviet military personnel assigned to militarized security forces of the Ministry of Internal Affairs, military construction and railroad troops, or civil defense troops. (These categories total more than 800,000 men.) 25X1

Over the past nine years, trends for military manpower have paralleled those for total costs in the two defense establishments:

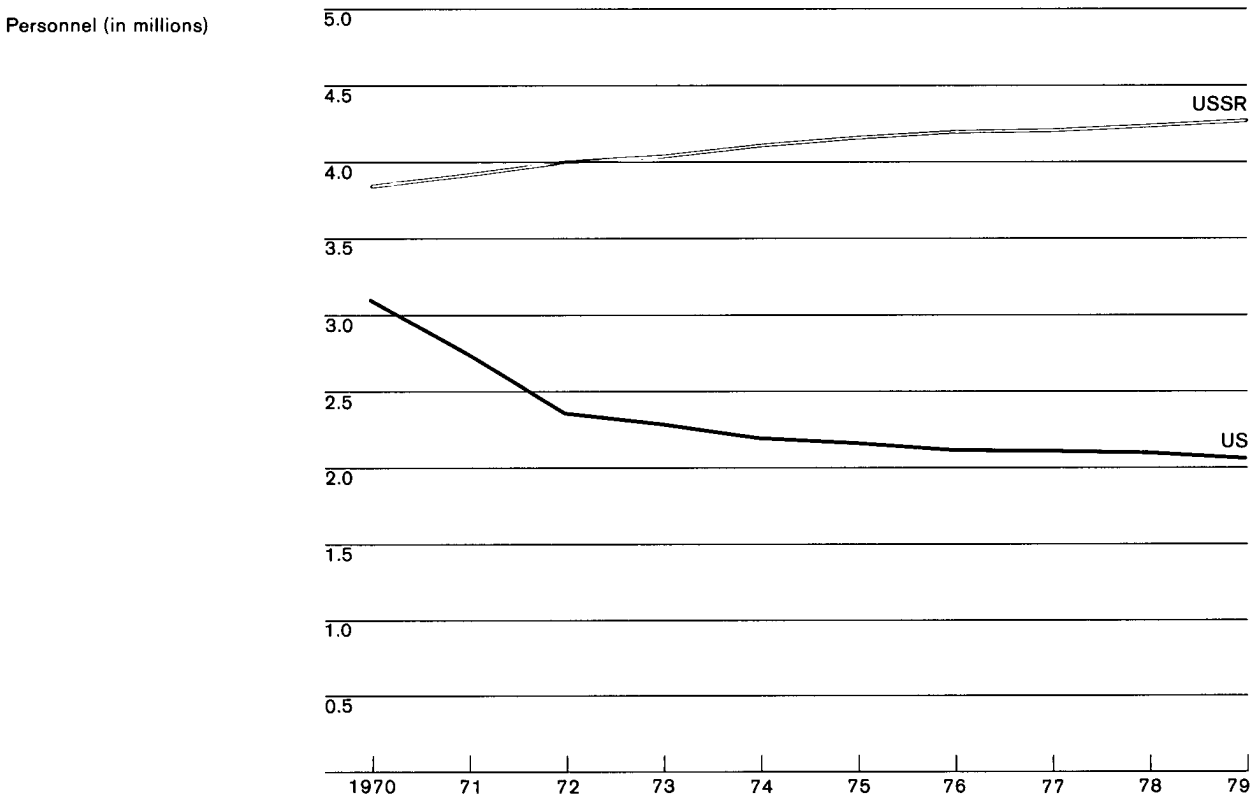
- Estimated Soviet military manpower grew by more than 400,000 between 1970 and 1979—a rate equal to 1.3 percent per year.
- The level of US military manpower continued to decline from its 1968 Vietnam-era peak. This decline amounted to more than a million men between 1970 and 1979. 25X1

Viewed on the basis of military services, the largest increase in Soviet manpower through the decade occurred in the Ground Forces. This increase amounted to more than 200,000 men—a growth rate of nearly 2 percent per year. Viewed on the basis of military missions, the number of people with support functions increased by nearly the same percentage. 25X1

Despite dissimilarities in the structure of the US and Soviet forces which make organizational comparisons misleading, the allocation of manpower to military missions can be roughly compared using the definitions of the US defense planning and programing categories. 25X1

[16] This results in a slight overstatement for the United States, since only those Coast Guard personnel with a military mission should be counted. 25X1

Total Military Manpower



25X1

582871 9-80

The manpower table highlights several differences between US and Soviet military missions:

- The Soviets have a large peripheral strike force composed of medium- and intermediate-range ballistic missiles of the Strategic Rocket Forces, medium-range bombers of Long-Range Aviation, and the older ballistic missile submarines of the Navy. The United States has no comparable force.

- The Soviets commit a large force of men and equipment to defense against air and missile attack. The more than 360,000 men in this mission are assigned to interceptor, surface-to-air missile, antiballistic missile, and control and warning forces. The United States has only a token force dedicated to this mission.

- Soviet general purpose forces are nearly twice as large as those of the United States. The Ground Forces, which are over two and a half times as large as the US counterpart, account for this difference.

25X1

There are also similarities in the shares of manpower allocated to the missions shown in the table:

- Intercontinental attack forces require approximately 4 percent of total manpower in each country.
- Support forces take about half of US and Soviet military manpower.

25X1

US and Soviet Military Manpower, 1979

Estimates in thousands

	US	USSR
Strategic offensive forces	70	290
Intercontinental	70	160
Peripheral	–	130
Strategic defense forces [1]	20	360
General purpose forces	920	1,800
Ground	540	1,470
Tactical aviation	170	100
Navy	170	210
Mobility	40	30
Support forces [2]	1,050	1,810
Total	**2,060**	**4,270**

[1] Includes men assigned to the strategic control and surveillance mission.
[2] Includes military personnel in the RDT&E and space missions.

25X1